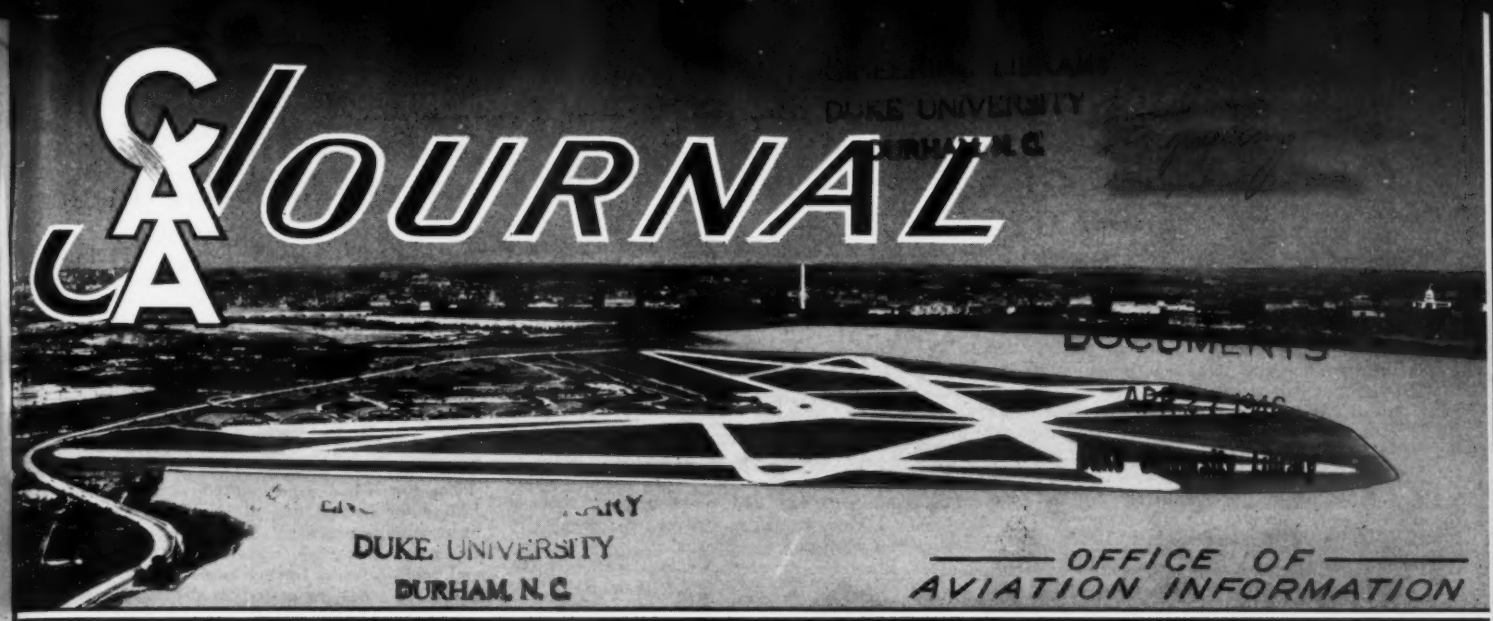
CAA JOURNAL



DUKE UNIVERSITY
DURHAM, N. C.

OFFICE OF AVIATION INFORMATION

Nationwide Boom In Civilian Aviation Disclosed by CAA

A tremendous nationwide increase in civil flying is reflected in figures released recently on activities of the General Inspection Division of the Civil Aeronautics Administration, covering the year from July 1, 1944, to June 30, 1945.

With the number of certificates issued up as much as 22 times over the comparable 1944 period, it has been impossible for the staff of the CAA General Inspection Division to keep up with demands for their services. This workload requires that the staff of inspectors, which has not been increased for more than a year, cover greater territory in their itineraries, and, therefore, has delayed the certification of pilots, mechanics, and planes.

Restrictions Eased—Thousands await inspection although the situation has been partially alleviated by changes in the regulations which permit appointment of qualified individuals outside of the Civil Aeronautics Administration to flight test applicants.

In this group are hundreds of military pilots and mechanics who desire to be certificated as commercial pilots, or civil aircraft and engine mechanics, on the basis of their military competency and experience. In addition, at almost every field planes purchased from war surplus stock are awaiting CAA certification as being airworthy before they can be flown by the new purchasers.

The increase in certificates granted has been great and represents the maximum work that can be done by the present staff of CAA inspectors.

On page 115 is a table giving comparison by months of inspection activities. It is broken down under seven categories so that a complete picture of the volume of the work is clearly shown. Comparisons cover the fiscal year 1945.

The greatest increase in any category is shown in written examinations which increased from 4654 in July 1944 to 10,677 in June 1945.

Air Routes Increasing

A survey made by the Air Transport Association of routes in the United States for transportation of passengers, airmail and cargo puts the total at 64,181 miles. The 1944 total was 62,037.

Guggenheim 1945 Honor to Wright For Aviation Aid

Citing his "outstanding contributions to the development of civil and military aircraft," the Daniel Guggenheim Medal for 1945 has been awarded to Dr. Theodore P. Wright, Administrator of Civil Aeronautics. The announcement was made by Dr. George W. Lewis, Chief of the National Advisory Committee for Aeronautics and Chairman of the Board of Awards established 1928 by gift from the Daniel Guggenheim fund for the promotion of aeronautics.

Highest U. S. Aviation Honor—The Guggenheim Medal is the highest aviation honor in the United States. Factors which brought Dr. Wright the Guggenheim Medal were his many technical contributions to the development of aircraft as an outstanding aeronautical engineer and executive. Included in these was the development, while associated with the Curtiss Airplane and Motor Company, of the airplane which in 1930 won the $100,000 Guggenheim Safety Aircraft Award.

The citation accompanying the award to Dr. Wright reads: "For outstanding contributions to the development of civil and military aircraft, and for notable achievement in assuring the success of our wartime production program."

This new honor comes to Dr. Wright not long after he was decorated with the War Department's

(See Wright Honored, page 110)

Pan-Am Is Recommended For So. Atlantic Route

Examiners of the Civil Aeronautics Board have reported favorably on the application of Pan American Airways for a certificate to provide air transportation of persons, property and mail along what is known as the South Atlantic Route. The recommendations have been submitted to the Board for action.

The terminal points are New York City and Johannesburg, Union of South Africa, with intermediate points at Langens (the Azores), Dakar (French West Africa), Monrovia (Liberia), and Leopoldville (Belgian Congo).

Air Charts Issued By Geodetic Survey Aid Private Fliers

A new series of 43 aeronautical maps, known as world air charts, together with 32 others which cover important routes between United States terminal points, has been prepared by the United States Coast & Geodetic Survey.

Except those for Alaska, which are restricted, the charts are available to the public.

The world air charts are smaller than the regional charts they are replacing, but are on the same scale, about 16 miles to the inch, and contain more detail. Each chart covers 4 degrees of latitude and 7 of longitude, and is 22 by 29 inches in size.

Index of Charts—The new charts have a particular appeal to the air-minded at this time owing to liberalization of Civil Air Regulations to the advantage of private flying, and the lifting of restrictions on most publications of this kind. Indexes identifying the charts by number and geographical location are given.

For some years the two basic series of charts for civil aeronautics in the United States have been the sectional and regional charts. The sectional charts, because of their comparatively large scale, about 8 miles to the inch, will continue as necessary supplements to any smaller scale series. The regional charts will be replaced with the world air charts as present editions are exhausted.

Pilots of the faster aircraft, produced under the impetus of war, liked the scale of the regional charts, but objected to the paper size. They also required more landmark detail than had been shown on the regional charts. The world air charts were tentatively adopted at the International Civil Aviation Conference in Chicago, in November 1944.

Alaska Charts Restricted—Charts of Alaska are still classified as restricted but along with charts of other restricted areas, they will probably be made available to civil users at a later date.

Route charts, while possessing certain disadvantages, always have been popular. Such charts now have been prepared for routes between important terminals of the United States and Alaska, and will be issued as "air route charts." They are identified by number and also by the names of the terminal

(See Air Charts, last page)

Secretary Wallace Favors Expansion Of Activities of CAA in Many Lines

Secretary of Commerce Wallace at a recent press conference recommended an increase in the support given the activities of the Weather Bureau, the Civil Aeronautics Administration and the Coast and Geodetic Survey. The end would be better services by the agencies in "the areas of economy with which they are concerned."

Specific recommendations made by the Secretary in this connection at the second of his press conferences since taking office include:

Specific Recommendations—To promote the development of civil, commercial and private aviation through expansion and modernization of airports and airways, air navigation aids, the development of advanced-typed private aircraft, and technical aeronautical improvements. This program will include the expansion of transoceanic facilities and international activities.

To expand and strengthen the service and research activities of the Weather Bureau, particularly at those points at which better knowledge and forecasts increase the efficiency of business, industrial, transportation, and agricultural operations.

To accelerate and extend the work of the Coast and Geodetic Survey in its surveying, mapping, and charting services better to aid engineering, industry, and transportation; and in the compilation of geodetic and geophysical data and topographic data necessary for exploration of natural resources and operations essential to the development of river basins and metropolitan areas.

To set up a science advisory committee to make a continuing review of the technological and research activities of the bureaus and to advise on general development and direction of such activities.

To promote cooperative scientific and engineering research activities with universities.

To put greater emphasis on the scientific research activities of the technical bureaus that are related to their service functions.

Plans 3 New Secretaries—Most important of the Secretary's moves in his organizational plan will be the appointment of three new Assistant Secretaries of Commerce. Legislation authorizing such action is now pending in Congress.

At present the Department has an Under Secretary, who acts as general deputy for the Secretary, and one Assistant Secretary.

Under the proposed new organization, the responsibilities of the Assistant Secretaries would be as follows: Air commerce and related technical services; international trade; industrial economy; small business.

The first of these constitutes the functions of the present Assistant Secretary. This set-up continues.

The Assistant Secretary for International Trade will act as the Department's spokesman in dealing with the Department of State on commercial policy, trade agreements, and the commercial officers of the foreign service.

The Assistant Secretary for Industrial Economy will be responsible for liaison with the business community, the formulation and execution of programs for promoting, fostering, and developing domestic commerce, and the development of the Department's programs and policies relating to the analysis and dissemination of basic information on the manufacturing, distribution, and service industries.

The Assistant Secretary for Small Business will be concerned with the special problems of small business. It will be his task to develop and execute programs designed to assist small business with specialized technological, laboratory, marketing research, management aid and other services which small business is unable to provide for itself.

Warner Elected Head Of International Council

Dr. Edward Warner has resigned his position as vice chairman of the Civil Aeronautics Board to become president of the Interim Council of the Provisional International Civil Aviation Organization at Montreal, Canada. His resignation was accepted by President Truman, September 14.

Dr. Edward Warner

From Harvard Dr. Warner received his A. B. degree; Massachusetts Institute of Technology conferred his M. S., and an honorary Doctor of Science degree was given by Norwich University, Northfield, Vt.

He served as Assistant Secretary of Navy for Air from 1926 to 1929. Editor of *Aviation Magazine*, and Professor of Aeronautical Engineering at M.I.T.

Dr. Warner is an Honorary Fellow of both the Institute of the Aeronautical Sciences and the Royal Aeronautical Society. He is the holder of the Wright Medal of the Society of Automotive Engineers; recipient of the Medal of the Aero Club de France for his book on aerodynamics of design; and the Wilbur Wright Lecturer of the Royal Aeronautical Society of London in 1943.

Alertness Important to Fliers

Lack of alertness is given as the contributing cause of an air collision near Corpus Christi, Tex., in which two student pilots soloing were injured. Report on the accident indicates that even though one flier was not conforming to the established flight pattern watchfulness might have prevented it.

Wright Honored

(Continued from first page)

Medal of "Commendation for Exceptional Civilian Service," and follows his Wilbur Wright Memorial Address in London last May, before the Royal Aeronautical Society of which he is an Honorary Fellow.

Enters Government Service—After a long career as aeronautical engineer and executive, Dr. Wright in 1940 severed all his business connections to serve on the National Defense Advisory Committee and its successors, the Office of Production Management, War Production Board and Aircraft Production Board.

It was Dr. Wright who first projected the methods and procedures which contributed substantially to the attainment of the production goals in the Aircraft War Production Program.

Dr. Wright also is a member of the National Advisory Committee for Aeronautics and chairman of its subcommittee on aerodynamics and past president and fellow of the Institute of Aeronautical Sciences. Prior to entering government service he was vice president and director of engineering of the Curtiss-Wright Corporation.

Supersonic Wind Tunnel Is Devoted to Research In Jet-propelled Planes

A new type of supersonic wind tunnel making possible research on aircraft velocities up to and beyond 2,000 miles an hour was recently completed at the laboratory of the National Advisory Committee for Aeronautics at Cleveland, Ohio.

Research on aircraft propulsion plants operating at equivalent sea level velocities is now being conducted there.

The new NACA wind tunnel is a unique research facility for investigating at supersonic velocity the operating characteristics of models of turbo jet, ram jet, and similar engines expected to propel aircraft and guided missiles through space at speeds hitherto unrealized except by projectiles shot from guns.

New Speed Era—Dr. Jerome C. Hunsaker, chairman of the NACA, points out that aviation is entering an era of revolutionary change resulting from the development of new methods of propulsion. The new systems open up extraordinary high-speed possibilities.

Dr. George W. Lewis, Director of Aeronautical Research of the NACA, in discussing the application of the new Cleveland tunnel, revealed that many of the projected propulsion systems should have sufficient thrust to take aircraft well into the supersonic speed range.

Those which depend on outside air for combustion, such as turbo jets and ram jets, must handle vast amounts of air at such high speeds as to change entirely the nature of air flow as we now know it.

The new supersonic propulsion research wind tunnel provides the only means we have of determining what the requirements are for the design and operation of these new propulsion plants at the high speeds for which they seem most promising.

Widens Research Field—This supersonic wind tunnel, along with the altitude wind tunnel, extends the propulsion research capabilities of NACA's Cleveland Laboratory to extremes of both altitude and speed. The altitude wind tunnel is unique in that it permits investigation of the operating characteristics of full-size jet engines and gas turbines as well as conventional engines at altitudes up to 50,000 feet. The humidity, temperature, pressure, and density conditions of extreme altitudes are simulated at air speeds up to 500 miles per hour. The extension of propulsion research into the supersonic speed ranges was accomplished by constructing the new supersonic propulsion research tunnel as an integral part of the altitude wind tunnel.

Forces Are Measured—The tunnel has a cross section of two and one-fourth square feet, through which air moves at extremely high speed. In the tunnel the model propulsion device is mounted in such a way as to measure the aerodynamic forces on it, as well as the thrust developed. Complete instrumentation is provided to determine performance characteristics with various fuels at different speeds and other operating conditions.

Schlieren camera apparatus is used to record air flow and compressibility effects on the model. This apparatus acts to magnify, delineate, and photograph the pressure lines of air flow so that means of securing both the proper aerodynamic shape as well as the directing of combustion and cooling air into the propulsion plant can be studied.

Abe Silverstein, Chief of the Engine Installation Division of the Cleveland laboratory, designed the supersonic tunnel installation. E. R. Sharp, Manager of the Cleveland Laboratory, supervised the entire project, which was carried through from conception to completion in the record-breaking time of 90 days.

Washington-Ottawa Service Approved By CAB Decision

Air service between Washington and the Canadian capital, Ottawa, is established by a recent Civil Aeronautics Board decision. This action was approved by the President in accordance with the Civil Aeronautics Act.

The Board also authorizes extensions of service by Pennsylvania-Central and American Airlines.

Service between Washington and Ottawa will be maintained by Colonial Airlines, Inc., by way of Montreal, Massena, Watertown, Syracuse, Binghamton, Scranton, Wilkes-Barre, Reading and Baltimore. Prior to the Board's decision Colonial's operations were limited to the route between Montreal and New York City.

Other Authorizations—Other service extensions authorized by the decision include Elmira-Corning and Rochester, N. Y., on Pennsylvania-Central's present route between Washington and Buffalo; and Elmira-Corning on American Airlines' route 7 between Chicago and New York.

The Canadian service authorized by this decision is in accordance with the bilateral agreement reached between Canada and the United States and concluded by an exchange of notes dated February 17, 1945.

The new route connects Ottawa, the Canadian capital, and Montreal, its most important industrial city, with Washington, D. C.

Colonial Selected—In selecting Colonial as the carrier to operate the new service between Washington and Ottawa and Montreal, the Board stated that Colonial is entirely dependent upon its present Montreal-New York route and that with the new route it will have an opportunity to spread part of its existing costs over the new route operation and thereby reduce its present per-mile costs.

In granting the authorization to Pennsylvania-Central to serve Rochester the Board stated that the evidence with respect to that city is conclusive that air service providing direct access to Washington will be a great improvement over the surface transportation now available and an extensive improvement over the present air service.

Route Extended—The Board found that there is a need for direct service between Binghamton and New York City and authorized the establishment of such service by amendment of American's route 7 to include Binghamton as an intermediate stop, pointing out that by this action service will be made available between Binghamton on the one hand and Rochester and Buffalo on the other in addition to New York City. Additional service to Elmira and Corning by American and PCA will connect an area of about 200,000 persons with New York, Buffalo, Syracuse, and Rochester in the case of American, and with Williamsport, Harrisburg, Washington, and Baltimore in the case of PCA.

Applications Denied—The Board denied the applications of United Air Lines, Page Airways, and Eastern Air Lines, and dismissed the applications of Hylan Flying Service and Union Airways, Inc. The application of American Airlines insofar as it requested an extension of its route 7 from Wilkes-Barre to Philadelphia was deferred.

Gets Foreign Carrier Permit

Trans-Canada Air Lines has been recommended for a foreign air carrier permit by an examiner of the Civil Aeronautics Board. The Canadian line asked to operate between White Horse, Yukon Territory, and Fairbanks, Alaska, in transporting persons and property.

Brazilian Praises CAA for Aiding Aviation Program

Left to Right: T. P. Wright, Administrator of Civil Aeronautics; Dr. Cesar Grillo, Director of Civil Aviation of Brazil; L. Welch Pogue, Chairman, Civil Aeronautics Board; William A. M. Burden, Assistant Secretary of Commerce and Dr. Eugenio Seifert, Technical Advisor to Director of Civil Aviation, Brazil.

The cooperation of the Civil Aeronautics Administration in the development of the Brazilian aviation program received high praise from Dr. Cesar Grillo, Director of Civil Aviation of Brazil, who was the guest of honor at a recent luncheon sponsored by the CAA at National Airport.

Dr. Grillo, introduced by W. A. M. Burden, Assistant Secretary of Commerce, told a group of representatives of the aviation industry, and Federal departments charged with aviation activities, that Brazil's fast growing aviation industry is patterned after that of the United States. Instruction of Brazilian students at United States schools, under CAA sponsorship, and coordination of activities by CAA technical men now in Brazil has been of immeasurable value, according to Dr. Grillo.

Brazil's pilot training routine is patterned directly after the Civilian Pilot Training Program, later War Training Service, which produced nearly 300,000 airmen for the U. S. Air Forces. It is continuing to produce top-grade pilots, navigators, and mechanics in Brazil, according to Dr. Grillo.

The Threat of Wires

Recent reports of the Civil Aeronautics Board on accidents again accent the hazards power and communication wires present to fliers. In Whiteford Township, Mich., a flier whose plane collided with a high tension wire was killed and his plane virtually demolished. The Board's report on the accident said it probably was caused by the pilot's failure to see the wire, coupled with the fact he was "flying at a recklessly low altitude."

Figures compiled for 1943 show there were 122 wire accidents in that year which resulted in 10 deaths and 40 personal injuries. Thirty-five of the accidents occurred in routine and 33 in simulated landings; 21 in low flight; 11 in forced landing practice; 10 in precautionary landings; 7 in take-offs and 5 in crop dusting.

Private Flying Taboos Lifted by CAB Decision

Two wartime restrictions on private flying are removed by recent decisions of the Civil Aeronautics Board. Pilots will no longer be required to have identification cards and users of airplanes will be permitted to carry cameras.

Other bans will be lifted as quickly as military restrictions are removed, the Board announces.

The regulation requiring an identification card showing picture, fingerprints and signature was imposed at the outbreak of the war as was the one regarding cameras.

Action by the Board followed consultation with representatives of the Army and Navy, and the decision points out there are still in force military regulations providing that no photographs shall be taken of military installations. These military restrictions are not affected by the Board's present action.

CAA Men and British Meet on Air Standards

The British Empire and its commonwealths are in complete agreement with the Civil Aeronautics Administration on standards of airways aids and future developments.

This is the view of the United States delegation which recently returned from London where it was invited as observers in the Commonwealth and Empire Radio for Civil Aviation Conference, and stayed to become active participants in every discussion and many decisions. Headed by Charles P. Taft, the delegation consisted of representatives of the Army, Navy, Coast Guard, Radio Technical Commission for Aeronautics, and the Civil Aeronautics Administration.

As dean of airways men at the conference, Charles I. Stanton, Deputy Administrator of Civil Aeronautics, found his experience in building and operating airways of interest and importance to the conferees. His assistant, William E. Jackson, Chief, Radio Section, Technical Development Division, dealt with the new developments for United States airways.

Most important items of agreement reached at the conference were the adoption of CAA-developed Very High Frequency, static-free communications for airport and approach control; the VHF two-course visual radio range for navigation facilities; and for the future use of the radar distance indicator to replace VHF markers; and use of the radar search device to aid tower operators to monitor planes doing instrument approaches, and to help in emergencies where plane equipment is not functioning, or where the plane is not equipped with instruments.

Zoning Ordinance Drafted

A suggested model for a municipal ordinance on airport zoning has been prepared by the Civil Aeronautics Administration Airport Service. It is for the consideration of political subdivisions in states which have enacted the model airport zoning act, sponsored by the CAA and the National Institute of Municipal Law Officers.

Buzzing and Unsightly Airports Are Aviation Menace, Says Geisse

Low flying and unsightly airports may cost aviation the support of the public for the greatly needed airport construction program, warns John H. Geisse, Assistant to the Administrator of Civil Aeronautics for Personal Flying.

"We are facing a serious problem in many localities," Mr. Geisse said, "in obtaining satisfactory airport locations because of the objections of neighboring residents.

Object to Low Flying—"For the most part, these people have not had the experience of living near an airport. Their objections stem from visiting airports in other localities, from contacts with others who have lived near airports, and from having a few thoughtless pilots fly needlessly low over their homes.

"No doubt these pilots have never given thought to the effect of their flying on the attainment of additional and more accessibly located airports. What they overlook is that they are building a prejudice against airports, needlessly and thoughtlessly. If we had all the airports we need, and they could not be taken from us, it would still be good policy to avoid antagonizing anyone on the ground.

Constitutes Threat—"When our greatest need is more airports and airports closer to people's homes, it is downright foolhardy for us not to do everything in our power to reduce to an absolute minimum inconvenience or disturbance to people on the ground. Their complaints reach the ears of others who have it in their power to keep airports out of their communities, and this they are doing in no small number."

Mr. Geisse recommended specifically that pilots quit buzzing houses, go around instead of over communities, and avoid practice flying in areas where this may be disturbing, in particular, choosing unoccupied buildings for pylons.

"Much could be done in revising airport practices and traffic patterns to minimize annoyance to the neighbors," Geisse said. He cited the case of a field sufficiently long to permit planes to take off in the direction of adjoining homes and turn before reaching them, or clear them with considerable altitude. Instead, however, the planes were landing and taking off again from the middle of the field and consequently clearing the homes at an annoying if not dangerous altitude.

In addition to noise, Mr. Geisse pointed out, there are objections to the unsightliness that has become associated in the public mind with airports. "In the majority of cases," he said, "this unsightliness has been due not to lack of capital, but to a lack of pride in appearance on the part of the operators, or just sheer laziness.

"Although most of these operators are thoroughly convinced that they have earned the right to share in the expected increase in business by having lived with aviation when the pickings were slim, aviation cannot afford to permit them to continue in the manner to which they have become accustomed. The CAA has no regulatory power in this respect, but everyone in the industry should use his influence to clean up existing airports, in order to remove the objection to the establishment of others."

The Pilot's Stake—The facts that the manufacturers eventually may solve the noise problem with quieter airplanes, and that recent scientific tests show that trucks passing in the street create noise as great as an airplane flying overhead, do not excuse current flying practices which aggravate a nuisance, Mr. Geisse declared. He made a special plea to service pilots, pointing out that while the people appreciated that military pilots had been flying in the common interest, this would not lessen their objections to low flying in peace time, and the resulting objections to establishment of airports in their vicinities. Military pilots, he said, had a direct stake in the matter, because of the jobs that would be created by the establishment of new airports.

Delivery by Parachute Tested

Delivery of mail and packages by parachute from low flying planes was tested recently at the Washington National Airport. The experiment was made by the Pennsylvania-Central Airlines and the Awitlik Parachute Co., of Trenton, N. J. The parachutes were dropped at designated points from a plane flying at 130 miles an hour.

Seaplanes Are Given Marked Landing Area

Additional recognition of the operating rights of seaplanes in harbors has been achieved in the establishment of a controlled and light-marked area in Flushing Bay, adjacent to LaGuardia Airport, at New York.

A serious operational problem has arisen with regard to the rights of seaplanes operating on the water, where other water-borne traffic is encountered.

Long experience with marine operation resulted in the development of conventions guiding traffic, and the establishment of International Rules of the Road, which have legal jurisdiction over the movements of all classes of marine craft. These rules make no provision for seaplanes, and have not yet been amended definitely to take care of their special needs.

Seaplanes at present are governed by the rules applying to powered marine craft. Consequently, great importance is given to the agreement of surface transportation men who use the harbor area, and it is believed to solidify the precedent previously established in the San Francisco Harbor to the point where a definite policy can be considered to have been established, especially since the Secretary of War has approved both agreements.

The New York agreement was the result of a conference, to which representatives of 34 organizations concerned with harbor rules were invited, and where the Coast Guard and Civil Aeronautics Administration officials collaborated. All present at the conference agreed to the establishment of a landing area to be controlled for the use of seaplane operations, and marked with green buoy-supported lights during these operations.

The agreement represented concessions from both surface and air vehicle operators. Seaplane standards require two rows of green lights, while marine channel markers require red lights on one side. The special control of these lights is the result of the compromise.

By having a controlled area, policed by the Coast Guard, the seaplane is not required to give way to rowboats, sailboats and small surface craft, as would otherwise be required by the Rules of the Road, and can depend on having a 9,000 feet cleared area available for landings and take-offs.

According to Fred Grieme, Chief, CAA Airport Development Section, the action of the Secretary of War in approving the solutions worked out in the San Francisco and New York harbors opens the way for solution of conflicts between surface and air vehicles of all our harbors.

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CAA JOURNAL

Henry A. Wallace
Secretary of Commerce

Civil Aeronautics Administration
T. P. Wright, Administrator

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PREPARED BY CAA AVIATION INFORMATION

CAA Answers

Q—Is it possible to fly across the continent in planes that are equipped only for water landings? P. C.

A—Transcontinental flights in seaplanes, and in planes equipped with floats, have been made repeatedly. In a test flight, a private pilot followed a transcontinental route along which water landings in lakes and rivers were available not more than 80 miles apart.

Q—What important jobs are held by women in aviation? W. D.

A—Almost all types of jobs except those at the very top are held by women. There are women airport managers, operators and owners of fixed-base operations, flying school owners and operators, aviation writers, aerial photographers, and aeronautical engineers.

Q—Will the Civilian Pilot Training Program be continued? H. T.

A—The Civil Aeronautics Administration has enabling legislation providing for the continuation of the Civilian Pilot Training Program. This legislation expires July 1, 1946. To date, no funds have been made available, nor can it be stated at this time whether funds will be provided. Should favorable action be taken contractors selected to continue the program will be chosen from recommendations made by sponsoring institutions. Approved flight schools will be in the most favorable position to become contractors.

Q—How soon will helicopters be available for purchase? W. G.

A—No helicopters are now being made for sale to civilians and none have been placed on the surplus airplane market. Various companies planning production have made estimates of when their machines will be available to the public. Most of them

(See CAA Answers, next page)

Subsidies for Airlines Opposed

A report on civil aviation, prepared at the request and for the information of British Liberal Party Headquarters, states airlines should as far as possible be self-supporting, without recourse to the taxpayer, except in the case of services which cannot be operated economically but which are required for social, administrative or strategic reasons.

Private Flying Interest On West Coast Booming, Region Report Discloses

Eagerness of private fliers along the West Coast to get back into the air has resulted in a veritable flying boom in the Sixth Region of the Civil Aeronautics Administration, according to H. A. Hook, Regional Administrator.

Work Taxes Staff—Although not yet free of the war restrictions clamped on private flying by the armed services, small airport operators, flying schools, and owners of personal planes are producing a volume of work which taxes the capacity of the CAA's staff in California, Utah, Nevada, and New Mexico.

Within the past six months, CAA work in the region showed rates of increase of from 140 to 240 percent, the greatest advance being in the number of written examinations and the least in identification cards issued. Pilot certificates with ratings and student certificates went up 160 percent, and aircraft certified, 170.

The Sixth Region is issuing pilot certificates to men in the service on the basis of their military competency at the rate of 1,000 a month, and this rate is expected to increase. Private pilot examiners are being appointed as rapidly as possible. In Los Angeles alone, the General Inspection Division Office of the CAA gave 830 examinations during June, and 1,650 in July.

1,000 Surplus Craft Sold—Surplus aircraft sales in the region in the last nine months have totaled 1,000. The majority of these aircraft have found their way into the Los Angeles, San Francisco, and San Joaquin Valley areas. More aircraft are ready for certification than can be handled at the present time. Approximately 35 of these aircraft are in the Oakland area, 50 in the Los Angeles area, and during a recent visit to San Diego, more aircraft were found at one airport than there were in the entire San Diego area prior to the war.

One small airport devoted exclusively to private flying, reported 90 take-offs and landings an hour at peak periods on Sundays. Practically all old airport sites have been reactivated and new sites are difficult to find in areas close to the major centers of population. On January 1 there were 34 designated airports in California inside the restricted zone. Today, there are 115, and 96 of these have been approved for flight training.

Restrictions on private flying still are in force throughout a 150-mile wide strip along the entire coast, and airports open for operation are limited to specified activities. When the Army considers all danger to the area is passed, it is expected all restrictions will be lifted and CAA officials expect a still greater increase in all kinds of flying.

CAA Answers

(Continued from preceding page)

believe it will be one or two years before this can be accomplished.

Q—What arrangements have been completed for giving flight training under the GI Bill of Rights? S. M.

A—A veteran may obtain flight training under the GI Bill of Rights by attending an accredited school where flight instruction is part of its curriculum, and also where the school is willing to accept payment for the course over two semesters as GI training money is now paid. Amendments to this bill are now pending in Congress designed to make it easier for the veteran to get flying training.

New CAA Publications

Three booklets on aviation, in which the essentials of authoritative information and interesting treatment are combined, have just been issued by the Civil Aeronautics Administration.

One is AVIATION'S PLACE IN CIVILIZATION, an address delivered by Administrator T. P. Wright of Civil Aeronautics before the Royal Aeronautical Society in London last May at the Thirty-third Wilbur Wright Memorial. The others are SMALL AIRPORTS and AIRPORT PLANNING FOR URBAN AREAS.

Administrator Wright traces man's progress in terms of transportation from the time of back-borne burdens to the conquest of the air. The effect of aviation on present and future civilization, together with forecasts as to its tremendous effect on transportation, are set forth.

SMALL AIRPORTS provides a comprehensive answer to the many problems confronting communities and the man who wants to build an airport. The booklet gives technical information pertaining to design and construction, and foresees many unexpected pitfalls which often are not considered by the inexperienced.

The booklet is separated into five sections: Planning, Design, Construction, Operation and Finance, and Maintenance. It discusses such widely differing phases as the amount of land needed, types of soils and the different problems each presents, profit possibilities, and the desirability of various lighting systems.

It lists also the addresses of the CAA Regional Offices where personal help can be obtained from experienced engineers of the CAA staff.

AIRPORT PLANNING FOR URBAN AREAS is a guidebook for individuals, or groups, who are confronted with the complex problems of building the large airport which must serve all types of planes from the tiny Cub type to the multi-engine, trans-oceanic transport.

It contains nearly a hundred pages, with illustrations, and diagrams, and information covering selection of the site for an airport and every phase to the actual operation, enabling acts, estimate of traffic, and many other development possibilities.

These booklets may be purchased from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. AVIATION'S PLACE IN CIVILIZATION is 15 cents the copy; SMALL AIRPORTS, 10 cents; and AIRPORT PLANNING FOR URBAN AREAS, 20 cents.

900 Flight Examiners To Speed Pilot Tests

Approximately 900 new flight examiners, appointed by the Civil Aeronautics Administration in accordance with the policy announced last July, are now helping its 150 CAA aeronautical inspectors handle the flood of applicants for pilot certificates.

With every CAA regional and district office daily crowded with pilots and mechanics taking examinations, and with every inspector covering itineraries that include hundreds of airports, and with other inspectors visiting the military bases and giving examinations to thousands of military for their civilian flying certificates, the lists of certificated airmen enlarges daily.

The 866 new examiners, appointed since July 1, authorized to give private pilot flight tests, will enable the small staff of regular inspectors to give better service to the general flying public. The examiner gives the successful applicant his pilot certificate.

CAA Air Experts to Aid Civil Flying in Germany

In response to a request from General Dwight Eisenhower to the Civil Aeronautics Administration for assistance in handling civil aviation in Germany and Austria, two experts will be assigned. One has already been named, Fred H. Grieme, and Administrator Wright will name the other later.

Mr. Grieme, Chief of the Airport Section of the Technical Development Division, left for Europe early in October to join General Eisenhower's headquarters staff. The extent of the duties involved is indicated in the General's request for CAA representatives "qualified to advise the Group Control Council of Germany and Allied Control Commission of Austria on all matters pertaining to air."

Fred H. Grieme

The CAA men will serve with Major General Robert W. Harper, head of the Air Division of Group Control, who discussed the problem of civil aviation in Germany with T. P. Wright, Administrator of Civil Aeronautics, when the latter was in Germany last May studying the effects of strategic bombing.

Mr. Grieme, an expert on European flying conditions and facilities, made the first U. S. air survey of Europe in 1923 as an accredited representative of the National Aeronautics Association. He has been connected with civil airways and airports work since 1929. Just before Pearl Harbor, he was liaison officer between the Army, Navy and the CAA, in which capacity he had much to do with the defense plans for Alaska and the Pacific Islands.

103 Lockheed Constellations Purchased by 8 Major Airlines

Eight major airlines have purchased a total of 103 Constellations, with delivery started October 1, according to Robert E. Gross, president of Lockheed Aircraft Corp.

With a top speed of better than 340 miles an hour and a capacity of 48 to 64 passengers, these giant transports will bring all the airports of the world within 40 hours flying time of the United States and will permit 10-hour service between New York and California.

Purchasers of the Constellations are American Export Airlines, Eastern Airlines, French Government Airlines, KLM Royal Dutch Airlines, KNILM Royal Netherlands Indies Airlines, Pan American World Airways, Pan American-Grace Airways and Transcontinental and Western Air.

Air Traffic in Australia

Figures released by the Department of Civil Aviation of the Commonwealth of Australia show that the number of passengers carried by Air Transport Services almost doubled in two years. In 1942, a total of 130,185 was carried and in 1944 the number was 241,863. In 1942 the miles flown were 6,931,370 and in '44 the total was 10,614,250.

Domestic Air Carrier Statistics

Operations for August 1945

Prepared from official reports, submitted by the air carriers listed, to the Civil Aeronautics Administration and the Civil Aeronautics Board

Operator and routes	Revenue miles flown	Revenue passengers carried [1]	Revenue passenger miles flown	Express carried (tons)	Express ton-miles flown	Passenger seat-miles flown	Revenue passenger load factor (per cent)
All American Aviation, Inc., Pittsburgh-Huntington, Jamestown, Williamsport, Harrisburg, Washington — **Total**	**130,966**	**0**	**0**	**5.9**	**856**	**0**	—
American Airlines, Inc. — **Total**	**4,305,072**	**125,073**	**73,627,316**	**943.0**	**554,345**	**81,170,465**	**90.71**
Dallas-Los Angeles	1,395,083	26,294	24,705,511	118.0	128,445	26,461,495	93.36
New York-Chicago	620,890	28,385	10,214,672	334.0	168,262	11,225,235	91.00
Boston-New York	308,140	31,710	5,496,110	156.0	24,876	6,145,469	89.43
Cleveland-Nashville	99,241	7,577	1,870,470	46.0	12,283	2,057,432	90.91
New York-Fort Worth	1,264,540	35,737	20,365,496	175.0	148,164	22,939,103	88.78
Washington-Chicago	168,672	8,059	3,011,186	42.0	19,062	3,379,095	89.11
Chicago-Fort Worth	245,028	9,658	4,394,212	36.0	23,069	4,952,435	88.73
Buffalo-Toronto	4,410	1,153	84,123	1.0	120	91,167	92.27
El Paso or Fort Worth-Mexico City	199,068	4,075	3,485,536	35.0	30,064	3,919,034	88.94
Braniff Airways, Inc. — **Total**	**754,792**	**36,696**	**13,891,772**	**102.6**	**47,959**	**15,097,463**	**92.01**
Chicago-Dallas	404,965	15,893	7,524,651	36.4	34,468	8,081,754	93.11
Denver-Brownsville; Amarillo-Oklahoma City	314,865	16,962	5,712,586	58.6	12,772	6,299,150	90.69
Houston-Nuevo Laredo	34,962	3,841	654,535	7.6	719	716,559	91.34
Chicago & Southern Air Lines, Inc. — **Total**	**528,108**	**21,014**	**9,048,713**	**74.4**	**32,705**	**11,043,324**	**81.94**
Chicago-New Orleans	281,918	13,308	5,114,511	51.1	22,663	5,881,884	86.95
Memphis-Houston	246,190	9,936	3,934,202	23.3	10,042	5,161,440	76.22
Continental Air Lines, Inc. — **Total**	**370,204**	**12,656**	**5,575,129**	**21.0**	**10,182**	**6,461,738**	**86.28**
Denver-El Paso-San Antonio	226,957	8,276	3,113,162	8.0	3,410	3,730,243	83.46
Pueblo-Tulsa	35,440	2,068	665,711	1.0	307	743,668	89.52
Denver-Kansas City	107,807	3,386	1,796,256	12.0	6,465	1,987,827	90.36
Delta Air Corporation — **Total**	**525,263**	**25,895**	**9,541,190**	**58.0**	**19,864**	**10,944,455**	**87.18**
Charleston or Savannah-Fort Worth	454,583	21,654	8,149,925	37.0	13,986	9,461,091	86.14
Atlanta-Cincinnati	70,680	4,526	1,391,265	21.0	5,878	1,483,364	93.79
Eastern Air Lines, Inc. — **Total**	**2,510,545**	**85,269**	**43,320,786**	**319.5**	**225,836**	**49,156,406**	**88.13**
Boston-San Antonio or Brownsville	896,009	32,963	15,944,804	115.0	75,462	17,902,654	89.06
Boston-Miami	881,717	29,130	13,897,967	109.5	88,656	16,358,981	84.96
Chicago-Jacksonville	361,916	17,688	7,120,717	47.0	30,489	7,201,879	98.87
Atlanta-Miami	259,147	11,973	4,534,147	33.0	21,820	5,428,228	83.53
Washington-St. Louis	111,756	4,912	1,823,151	15.0	9,409	2,264,664	80.50
Inland Air Lines, Inc. — **Total**	**156,678**	**5,377**	**1,757,623**	**3.8**	**1,174**	**2,276,520**	**77.21**
Denver-Great Falls	120,740	4,574	1,480,033	3.4	1,080	1,930,419	76.67
Cheyenne-Huron	35,938	803	277,590	.4	94	346,101	80.20
Mid-Continent Airlines, Inc. — **Total**	**335,668**	**16,887**	**4,899,994**	**16.6**	**5,417**	**6,120,474**	**80.06**
Minneapolis-Tulsa	216,186	10,730	3,269,888	12.2	4,083	4,170,002	78.41
Minneapolis-Des Moines, St. Louis or Kansas City	119,482	5,799	1,630,106	4.4	1,334	1,950,472	83.57
National Airlines, Inc. — **Total**	**590,815**	**14,122**	**7,183,817**	**22.3**	**10,801**	**8,031,301**	**89.45**
New York-Key West via Miami	391,543	9,630	4,691,377	9.6	6,428	5,260,509	89.18
Jacksonville-New Orleans	199,272	6,516	2,492,440	12.7	4,373	2,770,792	89.95
Northeast Airlines, Inc. — **Total**	**277,644**	**23,036**	**5,293,870**	**25.8**	**4,904**	**6,397,593**	**82.75**
Boston-Montreal or Presque Isle and Moncton	141,490	11,292	2,579,148	8.6	1,590	3,261,321	79.08
Boston-New York	136,154	11,744	2,714,722	17.2	3,314	3,136,272	86.56
Northwest Airlines, Inc. — **Total**	**1,250,406**	**35,184**	**23,373,297**	**133.4**	**79,358**	**25,471,215**	**91.76**
Chicago-Twin Cities-Seattle; Fargo-Winnipeg	973,516	35,101	18,304,803	102.0	59,171	20,081,993	91.15
Minneapolis-Duluth	7,488	.....	.....	.4	49	.....	.....
Minneapolis-New York	269,402	7,089	5,068,494	31.0	20,138	5,389,222	94.05
Pennsylvania-Central Airlines Corporation — **Total**	**1,166,431**	**74,466**	**21,092,850**	**311.0**	**80,132**	**24,303,825**	**86.79**
Norfolk-Detroit	603,243	48,211	10,730,563	151.0	33,456	12,562,820	85.42
Detroit-Milwaukee or Chicago	270,911	25,082	5,238,253	84.0	19,494	5,672,639	92.34
Washington-Buffalo	21,180	1,272	373,062	1.0	352	444,780	83.88
Pittsburgh-Buffalo	26,383	2,396	472,947	15.0	2,325	547,247	86.42
Pittsburgh-Birmingham	244,714	10,294	4,278,025	60.0	24,505	5,076,339	84.27
Transcontinental & Western Air, Inc. — **Total**	**3,031,552**	**56,809**	**51,790,651**	**663.0**	**339,443**	**57,281,803**	**90.41**
New York-Los Angeles	1,915,316	43,209	32,608,735	365.0	217,731	36,831,578	91.01
Dayton-Chicago	47,497	3,720	922,979	18.0	4,304	981,016	94.08
Winslow-San Francisco	229,814	10,933	4,248,172	22.0	8,319	4,627,818	91.80
Kansas City-Pittsburgh via Chicago	518,781	14,364	8,679,026	172.0	85,411	9,394,159	92.39
St. Louis-Detroit via Cincinnati and Dayton	141,885	9,631	2,431,037	53.0	10,201	2,873,057	84.61
Washington-Dayton via Columbus	103,578	4,656	1,653,527	22.0	7,785	2,044,510	80.88
Pittsburgh-Boston	74,681	2,731	1,247,175	11.0	5,692	1,529,665	81.53
United Air Lines, Inc. — **Total**	**3,768,365**	**83,152**	**60,206,823**	**494.1**	**389,625**	**62,631,680**	**96.13**
New York-San Francisco	2,833,881	44,963	42,136,944	353.4	322,842	43,929,343	97.93
Salt Lake City-Seattle	197,042	8,067	3,932,443	33.2	21,285	4,161,429	94.50
Seattle-San Diego	566,610	28,708	10,968,536	88.8	33,089	11,121,437	98.63
Seattle-Vancouver	16,960	2,458	342,434	2.4	313	349,910	97.86
Washington-Toledo	69,800	3,445	1,357,330	5.1	4,025	1,422,734	95.40
Cleveland-Boston	72,672	2,701	1,357,701	9.4	7,896	1,468,797	92.44
Denver-Cheyenne	11,400	1,173	111,435	1.8	175	178,030	62.59
Western Air Lines, Inc. — **Total**	**493,174**	**21,703**	**9,132,364**	**67.4**	**24,824**	**10,270,402**	**88.92**
San Diego-Salt Lake City	273,519	10,419	5,014,462	40.5	16,672	5,738,055	87.39
Salt Lake City-Great Falls	62,080	2,332	1,073,114	4.8	1,002	1,302,107	82.41
Great Falls-Lethbridge	10,230	854	145,744	.9	131	213,564	68.24
Los Angeles-San Francisco	147,345	8,098	2,899,044	21.2	7,019	3,016,676	96.10
Total	**20,195,683**	**637,339**	**339,736,195**	**3,261.8**	**1,827,425**	**376,658,654**	**90.20**
Caribbean Atlantic Airlines, Inc., San Juan-Mayaguez and Christiansted — **Total**	**55,483**	**4,667**	**255,975**	**12.0**	**906**	**566,460**	**45.19**
Colonial Airlines, Inc., New York-Montreal — **Total**	**187,211**	**11,526**	**3,628,830**	**10.0**	**2,964**	**3,931,431**	**92.30**
Hawaiian Airlines, Ltd., Honolulu-Hilo and Port Allen — **Total**	**130,741**	**18,458**	**2,684,289**	**244.0**	**36,345**	**2,845,512**	**94.33**
Grand Total	**20,569,118**	**671,990**	**346,305,289**	**3,527.8**	**1,867,640**	**384,002,067**	**90.18**

[1] The total passengers carried for each airline is an unduplicated figure.

Domestic Air Carrier Statistics—Continued

Operations for First 8 Months of 1945 as Compared with Same Period of 1944

Operator	Revenue miles flown January–August		Revenue passengers carried (unduplicated) January–August		Revenue passenger miles flown January–August	
	1945	1944	1945	1944	1945	1944
All American Aviation, Inc.	959,952	770,457	0	0	0	0
American Airlines, Inc.	30,443,221	21,102,075	815,640	576,999	499,711,355	349,844,216
Braniff Airways, Inc.	5,040,488	3,156,667	207,537	131,126	89,786,912	55,702,718
Chicago & Southern Air Lines, Inc.	3,240,530	1,609,104	116,481	60,710	52,436,165	28,232,152
Continental Air Lines, Inc.	2,384,051	1,466,459	74,429	41,299	30,958,999	14,295,098
Delta Air Corporation	3,657,230	2,048,773	168,210	98,075	65,416,488	38,949,973
Eastern Air Lines, Inc.	17,144,205	10,517,808	553,786	283,006	290,156,352	160,176,804
Inland Air Lines, Inc.	1,141,518	731,989	38,197	12,594	12,278,734	4,032,566
Mid-Continent Airlines, Inc.	1,917,399	1,452,522	86,972	47,282	23,624,674	13,591,469
National Airlines, Inc.	4,016,505	1,969,432	99,687	71,921	48,795,896	23,693,387
Northeast Airlines, Inc.	1,303,453	657,939	95,222	34,187	21,335,071	8,322,595
Northwest Airlines, Inc.	7,488,388	4,262,677	198,813	102,031	130,546,792	69,020,294
Pennsylvania-Central Airlines Corporation	6,871,751	2,963,569	457,492	235,251	114,421,202	51,832,169
Transcontinental & Western Air, Inc.	20,470,415	13,488,822	352,397	246,828	332,847,917	215,302,811
United Air Lines, Inc.	25,178,229	18,438,087	467,173	323,341	378,276,206	288,787,086
Western Air Lines, Inc.	3,385,698	1,839,091	138,894	70,649	60,498,481	33,619,281
Total	134,643,033	86,475,471	3,870,930	2,335,299	2,151,091,244	1,355,402,619
Index (1944 = 100)	155.70	100.00	165.76	100.00	158.70	100.00
Caribbean Atlantic Airlines, Inc.	200,604	147,564	19,188	13,708	1,179,807	946,578
Colonial Airlines, Inc.	1,070,373	604,548	56,416	33,735	17,559,197	10,426,486
Hawaiian Airlines, Ltd.	762,160	620,007	99,735	72,443	14,296,872	10,372,241
Grand Total	136,676,170	87,847,590	4,046,269	2,455,185	2,184,127,120	1,377,147,924
Index (1944 = 100)	155.58	100.00	164.81	100.00	158.60	100.00

Operator	Express carried (tons) January–August		Express ton-miles flown January–August		Passenger seat-miles flown January–August		Revenue passenger load factor (percent) January–August	
	1945	1944	1945	1944	1945	1944	1945	1944
All American Aviation, Inc.	53.6	43.3	8,365	6,492	0	0	—	—
American Airlines, Inc.	9,960.5	7,012.9	5,029,222	3,236,095	555,108,639	388,517,178	90.02	90.05
Braniff Airways, Inc.	740.4	377.4	359,055	173,179	100,469,817	60,707,216	89.37	91.76
Chicago & Southern Air Lines, Inc.	610.2	330.2	261,339	134,778	67,097,547	33,044,739	78.15	85.44
Continental Air Lines, Inc.	159.5	59.6	75,189	24,274	38,653,469	16,516,044	80.09	86.55
Delta Air Corporation	453.2	298.3	169,164	109,520	75,903,915	42,453,808	86.18	91.75
Eastern Air Lines, Inc.	2,824.0	1,710.3	1,725,146	1,058,809	332,411,396	184,606,134	87.29	86.77
Inland Air Lines, Inc.	35.4	13.4	8,410	2,651	16,964,929	5,671,450	72.38	71.10
Mid-Continent Airlines, Inc.	186.0	75.5	40,575	20,056	32,540,801	17,991,959	72.60	75.54
National Airlines, Inc.	186.6	136.7	98,147	46,765	54,001,924	27,130,780	90.36	87.33
Northeast Airlines, Inc.	134.6	39.6	25,941	7,750	29,576,452	13,713,296	72.14	60.69
Northwest Airlines, Inc.	1,062.4	662.4	615,155	350,815	148,205,646	80,760,223	80.87	85.46
Pennsylvania-Central Airlines Corporation	2,790.6	1,518.0	625,052	289,343	141,482,572	61,751,254	80.87	83.94
Transcontinental & Western Air, Inc.	6,308.6	4,251.6	3,297,289	2,229,223	367,838,962	234,774,467	90.49	91.71
United Air Lines, Inc.	4,303.7	3,403.4	3,466,916	2,571,949	394,795,896	300,324,474	95.82	96.16
Western Air Lines, Inc.	483.9	292.0	219,903	147,095	68,849,883	37,748,581	87.87	89.06
Total	30,243.2	20,224.6	16,024,868	10,408,794	2,423,901,848	1,505,711,603	88.74	90.02
Index (1944 = 100)	149.54	100.00	153.96	100.00	160.98	100.00	98.58	100.00
Caribbean Atlantic Airlines, Inc.	99.5	61.9	8,045	5,301	2,140,625	1,308,708	55.12	72.33
Colonial Airlines, Inc.	77.0	75.3	22,932	23,707	22,439,703	12,553,124	78.25	83.06
Hawaiian Airlines, Ltd.	2,150.9	2,367.0	327,519	364,990	15,134,760	10,981,920	94.46	94.44
Grand Total	32,570.6	22,728.8	16,383,364	10,802,792	2,463,616,936	1,530,555,355	88.66	89.98
Index (1944 = 100)	143.30	100.00	151.66	100.00	160.96	100.00	98.53	100.00

	January	February	March	April	May	June	July	August	Total
Passengers carried (unduplicated) total revenue and non-revenue:[1]									
16 domestic airlines	363,276	341,980	452,744	458,924	520,257	557,622	599,955	646,988	3,941,746
Total airlines	379,954	357,125	470,654	476,644	537,564	583,968	630,944	681,970	4,118,823
Passenger miles flown (total revenue and non-revenue):									
16 domestic airlines	209,288,931	190,324,414	251,170,561	256,892,372	289,846,496	306,872,654	331,639,158	343,889,101	2,179,923,687
Total airlines	212,308,947	193,041,242	254,553,089	260,301,209	293,224,437	311,752,948	337,427,431	350,495,973	2,213,105,276

[1] Preliminary. Due to the delay in reporting by some companies, these figures are subject to change in subsequent publications.

Comparison of General Inspection Activities—July 1944 Through June 1945—*See story on first page*

	1944						1945					
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Private Pilot Certs.	733	776	698	785	552	547	637	640	957	834	1158	1355
Commercial Pilot Certs.	315	315	276	223	250	1493	3982	4852	6460	5422	7305	6664
Mechanic Certs.	70	76	84	95	104	130	140	152	183	219	248	287
*Identification Cards.	5377	6372	5959	6030	4635	3429	2981	3143	4202	4485	5239	5946
Written Exams.	4654	5027	4816	4860	4570	4656	5522	8176	7819	8146	9729	10677
Aircraft Insp.	2579	2334	1938	1893	1960	1993	2200	2300	2555	2675	2872	2703
Aircraft Registrations.	315	320	326	330	350	470	940	1130	1590	1556	2414	1863

* No longer required.

Disregards Weather

In a flight from Burley to Ogden, Utah, Benjamin F. Woodruff, pilot, Ogden, took off knowingly into marginal weather and crashed into a mountain side about 50 miles from his destination, killing himself and his two passengers, E. M. Cole, Ogden, and Lee Eddy, Salt Lake City. The latter two were employes of the Amalgamated Sugar Co., Ogden, owner of the plane.

Woodruff held a commercial pilot certificate with instructor ratings and had logged 1,800 miles, about 1,200 of which was in the kind of plane in the crash.

The probable cause of the accident is given as disregard for impending weather. It is noted in the report that the pilot failed to consult the weather report and selected the least favorable route.

Report On Airline Crash—Following a night instrument approach to the Burbank, Calif., Airport American Airlines' Flight 6001 crashed against the nearby Verdugo Hills. All of the 21 passengers and the three crew members were killed and the plane was destroyed by impact and fire.

It is evident that after making a left turn the pilot decided to execute the standard "missed-approach" procedure but in so doing failed to modify the procedure in keeping with his position and heading. As a result he made a climbing turn toward the nearby foothills instead of away from them as would have been the case had the standard "missed-approach" procedure been executed from the normal position.

The "missed-approach" routine is as follows: if ground contact is not made upon passing over the localizer the pilot should immediately make a climbing right turn to a magnetic course of 270°, climb back to 3500 feet altitude and ask the company ground station for further instructions.

At the time of the departure from Phoenix en route to Burbank the aircraft was equipped with de-icers and was loaded to 25,332 lbs., which was within the allowable limits. The weight was properly distributed with respect to the center of gravity. It was estimated by American that at the time of the plane's arrival at Burbank 215 gallons of fuel remained in the tanks. American's maintenance record of the aircraft revealed no previous malfunctioning that could in any way have contributed to the accident.

The Board in reporting on the probable cause of the accident stated the possibility of an accident became a potentiality when the company ground personnel failed to obtain and transmit important weather information to the pilot. Failure to obtain and transmit this information to the pilot constitutes negligence on the part of the company. This, however, did not relieve the pilot of his responsibility to conduct a safe flight although it did place him in a disadvantageous position. Had he properly executed the "missed-approach" procedure it is unlikely that the accident would have occurred. The Board, therefore, determines that the probable cause of this accident was "the pilot's attempt to use the standard 'missed-approach' procedure after having followed another course up to a point where it was impossible to apply this procedure safely."

Brothers Killed In Crash—Spinning in from about 200-feet altitude was fatal to Student Pilot Louis William Beard and his brother, Vernon H. Beard, both of South Whitley, Ind.

Louis Beard, 41, was certificated as a student pilot and had flown about 40 solo hours including 11 hours in the past 30 days. Vernon, 43, was not certificated as an airman.

Pilot and passenger took off for a local pleasure flight from a pasture near South Whitley into a gusty southwest wind. After leaving the ground the aircraft was held low for about 600 feet and then climbed steeply to an altitude of about 200 feet where a steep right turn was started. This turn had progressed about 90° when the plane stalled and spun to the right making two turns before striking the ground.

Investigation disclosed that there had been ample fuel and there was no indication of malfunctioning of the aircraft or its components. Four certificated instructors who had instructed Student Beard expressed the opinion that he was reluctant in accepting advice.

The probable cause of this accident was an excessively steep take-off climb which resulted in a stall and spin at low altitude. A contributing factor was the student's over-confident attitude.

Student Pilots Injured—Failure to recover from a spin resulted in an accident in which Student Pilots John Lawrence Easterling, Jr., and Lawrence Benjamin Stogner were seriously injured and the aircraft was demolished. The accident occurred two miles east of the Hartsville, S. C., Airport.

Easterling, 18, had accumulated about 4 hours of solo flight time. Stogner, 34, had flown approximately 44 solo hours. Both held student certificates.

The probable cause of this accident was failure to make complete recovery from a spin. A contributing factor was the inexperience of the pilots.

Question of Judgment—During a flight in which he followed a canyon and roadway over rapidly rising terrain into adverse weather, Pilot Kenneth Park Hamblin stalled the plane and crashed into a rocky gorge. The accident in which the pilot and his passenger, Miss Jewell D. Callihan, both of Denver, Colo., were killed and the aircraft demolished, occurred near Jerome, Ariz.

Hamblin held a private pilot certificate with a single-engine land rating. He had flown approximately 123 solo hours all in the type plane involved. Miss Callihan was not certificated as a pilot.

Witnesses stated that the engine appeared to be functioning normally and evidence indicated that considerable power was being developed at the time of impact. Hamblin was apparently attempting to turn back out of the canyon when the crash occurred. The weather forecast for that area about the time of the accident was intermittent light rain with light snow. The mountain tops in the vicinity were obscured by clouds and the cloud base was estimated to have been about 7000 feet above sea level. Although terrain elevation at the scene of the accident was approximately 5600 feet, the canyon in this area rises rapidly to an elevation of 7025 feet in approximately two miles. This pilot displayed extremely poor judgment in attempting to fly through the canyon under existing conditions.

The probable cause of this accident was a stall while attempting a turn to get out of the canyon.

Stalls in Turbulent Wind—A plane piloted by James Melville Abbett, Glendale, Calif., was caught in a strong gust of wind and stalled above the Tri-City Airport, San Bernardino, Calif. The plane crashed and Abbett sustained serious injuries. The craft was demolished.

Abbett, 31, held a student pilot certificate and had flown about 36 hours, all in the type plane involved.

Abbett took off from the Monrovia Airport for a cross-country flight to the Tri-City Airport. Arriving at his destination during a gusty 32 to 50 mph wind storm the pilot circled the field. With the engine throttled he started a turn approximately 100 feet above the ground apparently to land downwind. During the turn the plane was stalled and crashed to the ground on the left wing and nose.

Investigation revealed no evidence of failure of any part of the aircraft. Abbett said he recalled circling the field and seeing people on the ground apparently trying to indicate the wind direction and its gustiness but remembered nothing pertaining to the accident. Evidence indicated that he misinterpreted the wind direction.

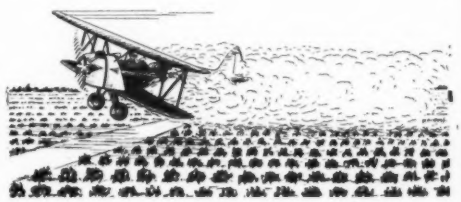
Crop Dusting Accidents—Two pilots were killed in crop dusting accidents investigated by the Civil Aeronautics Board. One occurred near Waverly, La., and the other in the vicinity of Bayview, Tex.

Chester John Montgomery, 28, Tallulah, La., took off with a load of insecticide and flew to a plantation between Waverly and Epps. Here he dusted crops until about 10:45 a. m., then landed on an adjacent strip to reload. At this time he remarked that it was getting rough and windy and he was going to finish as soon as possible. He took off and flew at an altitude of about 50 feet. The wind was south 25 mph and gusty. At the end of the southbound run a steep turn was started to the right. This turn had progressed nearly through 180° when the aircraft fell off to the right and crashed.

It was ascertained that there had been ample fuel. The weight and cargo limitations of the aircraft were not exceeded. There was no indication of any malfunctioning of the engine or aircraft and it seems probable the power reduction was intentional when the pilot thought the crash inevitable.

The probable cause of this accident was failure to maintain control of the aircraft during a steeply banked downwind turn near the ground. A contributing factor was the strong gusty wind.

The probable cause of the accident in which Crittenden Roger Richmond, 32, Harlingen, Tex., was killed near Bayview was given in the report as lack of alertness.



Richmond took off from a field near the site of the accident and for the next 15 minutes dusted a citrus grove. Immediately after finishing the last southbound swath he pulled up and the lower left wing struck a 50-foot palm tree near its top. A portion of this wing panel was sheared off. The aircraft continued to climb to an altitude of about 150 feet where it started a slow left turn. About 200 yards farther on it dived through a power line and crashed nose-first in a partially inverted attitude. Fire followed.

Investigation indicated no malfunctioning of plane, engine or components prior to collision with the tree. Most of the dust had been used and the aircraft was not loaded heavily. Evidence indicated that considerable power was being developed at the time of impact.

Low Flying; High Wind—Low flying and a high gusty wind are given as the probable causes of the airplane accident in which John Calvin May, Washington, D. C., was killed and his passenger, Robert B. Sumner, Augusta, Ga., was seriously injured.

May's plane hit a tree about 60 feet high at Omaha, Ga., when he circled low over a friend's house. At the time the wind was blowing at about 25 miles an hour with frequent gusts which attained a velocity of 45.

May, 40, a private pilot with a single-engine land rating, had flown about 190 solo hours of which some 65 had been in the past 90 days. Sumner was not certificated as an airman.

Investigation disclosed no evidence of malfunctioning of the aircraft or its components. Ample fuel was in the tank and indications were that considerable power was being developed at the time of impact.

(See Accident Reports, next page)

Accident Reports

Paid the Price—Reckless low flying over the Coleman Airpor., Tex., is given by the Civil Aeronautics Board report as the probable cause of the accident in which the pilot, B. L. Bryan, was fatally injured and his passenger Floyd H. Harris was seriously hurt.

Bryan, 41, held a commercial pilot certificate with single-engine land, and flight instructor ratings. He had flown about 1968 solo hours including 1600 in the type plane involved. Harris, 30, held a student certificate and had accumulated about 100 hours of solo flight time.

Bryan and Harris took off from the Coleman Airport on a local pleasure flight. After circling in the vicinity of the airport for several minutes the plane was flown across the airport at a very low altitude. It passed in front of the hangar and was pulled up into a steep climbing turn to an altitude of about 300 feet. When about 90° of the turn had been completed the aircraft was stalled. Recovery was not effected and the plane struck the ground, bounced and slid about 100 feet before stopping in an upright position.

Examination of the wreckage disclosed no evidence of failure of any part of the aircraft prior to the accident. Power was being developed at the time of impact. Harris said he could not recall what maneuvers were being performed but that he would not have flown the plane in such a manner.

Stalls in Climbing Turn—Two persons were killed in an accident near Donna, Tex., when the pilot circled low and his plane stalled.

Alvin Farr Chapman, pilot of Saginaw, Mich., took off from the Elsa Airport with Miss Lillian Thompson as passenger, and flew to her home approximately 10 miles south of the airport. By prearrangement Miss Thompson's father and brothers were in their yard watching for the plane to circle the house. They observed its approach at an estimated altitude of 200 to 300 feet. After circling the house the pilot made a 180° turn and flew back over the residence in a south-southeasterly direction into a gusty 25 to 35 mph south wind. Immediately after passing over the house, and at an altitude of about 200 feet, the aircraft was seen to enter a steep climbing turn during which it was stalled. It slipped to the ground on the left wing tip between some trees, skidded across the highway and came to rest on the left side of the fuselage against a telephone pole.

Investigation revealed no indication of failure of any part of the aircraft prior to impact and witnesses stated that the engine seemed to be operating normally.

Chapman, 45, held a private certificate with a single-engine land rating. An accurate record of his flying experience could not be ascertained. Miss Thompson, 26, was not certificated as a pilot.

Landing Gear Collapses—Failure of the landing gear during take-off resulted in an accident in which Pilot Ross Martin Sams, of Waco, Tex., was seriously injured and the plane was extensively damaged at the Newland Airport, Waco.

Sams held a private pilot certificate with a single-engine, land rating. He had flown about 623 solo hours all in the type plane involved.

On a test flight following repair of the left landing gear, Sams had progressed about 450 feet from the starting point of the take-off run when the left side of the landing gear collapsed and the plane dropped to the ground on the left wing and fuselage. It pivoted on the nose and reversed direction before coming to a stop.

Investigation revealed that the left side of the

landing gear had failed by bending in the vicinity of the step. About one month prior to this accident the left side of the landing gear had received major damage when the plane collided with a stump. Replacement parts of acceptable substitute material were installed by a certificated mechanic and his helper who stated that the repaired strut did not fit exactly and considerable difficulty was experienced in installing the parts.

Metallurgical examination of the failed strut showed its tensile strength and quality to be above the required minimums. No signs of defects in the welding of the step to the strut were found nor was there any indication that the welding had in any way weakened the strut. Some twisting of the strut to make it line up with the fuselage fitting had probably caused distortion of the drag strut and this, together with the load on its attached step by the 210-pound pilot as he entered the plane, may have weakened the part resulting in its final collapse.

Witnesses stated that the take-off run from a moderately smooth area into a south-southeast 8 mph wind was normal prior to the failure, with the exception that the tail was a little higher than usual.

The probable cause of this accident was the collapse of a landing gear strut due to bending near the step.

CAA and CAB Releases

Copies of CAA releases may be obtained from the CAA Office of Aviation Information. CAB releases are obtainable from the Public Information Section of the Board. Both offices are located in the Department of Commerce Building, Washington 25, D. C.

Administration

"Warns Low Flying, Unsightly Airports May Cost Aviation Public Support"

"CAA Reports Private Flying Boom Under Way Along West Coast"

"AAF and CAA Giving Mechanics Refresher Courses at 600 Bases"

"Students Who Carry Passengers to Lose Their Certificates"

"Nationwide Upsurge in Flying Interest Revealed in Report of CAA General Inspection Staff"

"Half Million AAF Veterans Will Seek Postwar Jobs in Aviation"

"CAA Men Asked to Help Eisenhower with Civil Aviation in Conquered Lands"

"How to Start a Flying School"

Board

"CAB Repeals Wartime Regulation Preventing Use of Cameras by Passengers on Airplanes"

"Colonial Granted Washington-Ottawa Route in Board Decision"

"CAB Removes Wartime Restriction on Private Flying Requiring Carrying of Identification Cards"

"Examiners' Report in South Atlantic Routes Case Issued"

New Types and Models Approved

(Approval numbers and dates in parenthesis)

New Types

Aircraft—

Piper model L-14, 3-place closed land monoplane. Engine, Lycoming 0-290-C. (Type Certificate No. 760, 7-31-45)

Engines—

Warner Super Scarab models, 185, 185J and 185K; 7 cyl. radial aircooled. Rating: Maximum, except take-off, 185 hp at 2175 rpm at sea level; Take-off, 200 hp at 2475 rpm. Dry weight 344 lbs., 360 lbs. and 351 lbs. respectively. Model 185K has provisions for either a constant speed or two-position hydraulic propeller. (Type certificate No. 235, 5-12-45)

Jacobs, models R-755A1 and A2, 7 cylinder radial air cooled. Rated 300 hp at 2200 rpm for all operations. Dry weights 505 lbs. and 511 lbs., respectively. Model A2 provides for use of hydraulically coatrollable propeller. Both models optionally provide for use of generator, starter, fuel and hydraulic pumps. (Type Certificate No. 237, 8-20-45)

Gliders—

Laister-Kauffmann, models LK-10A (Army model TG-4A) and LK-10B; 2-place closed land monoplane; Class I. (Type Certificate No. 15, 6-8-45)

Midwest Sailplains model MU-1, 1 POLM, Class I. (Type Certificate No. 16, 10-13-44)

Propellers—

Curtiss, model 55522; aluminum alloy; 8 ft. 0 in. to 7 ft. 0 in. diameter; 96 in. to 48 in. pitch; 220 hp, 2075 rpm. (Type Certificate No. 816, 5-2-45)

Flottorp, model 90; wood; 90 in. diameter; 70 in. to 54 in. pitch; 125 hp, 2050 rpm. (Type Certificate No. 817, 5-10-45)

G. B. Lewis, models L55C, L55C-1, L55C-2; wood; 72 in., 71 in., 70 in. diameter respectively; 46 in. to 32 in. pitch; 90 hp, 2700 rpm. (Type Certificate No. 818, 5-11-45)

Koppers, model 221 2-blade propeller with 1-99 blades; steel hub with wood blades; 99 in. to 92 in. diameter; automatic pitch; 220 hp, 1925 rpm. (Type Certificate No. 819, 5-11-45)

Kopper's model F200 2-blade propeller with P00-78 blades; steel hub with wood blades; 78 in. to 70 in. diameter; automatic pitch; 125 hp, 2600 rpm. (Type Certificate No. 820, 5-16-45)

Hartzell, models 8612E and 44K13397; wood; 86 in. diameter; pitch: (model 8612E) 73 in. to 63 in., (model 44K13397) 69 in.; 165 hp, 2100 rpm. (Type Certificate No. 821, 5-25-45)

McCauley, model C-1000 two-blade propeller with SS225 blades; steel hub and blades; 7 ft. 2 in. diameter; pitch adjustable on the ground; 200 hp, 2450 rpm. (Type Certificate No. 823, 6-20-45)

Appliances—

Northwest Air Service, skis, model GS-5000. Approved static load per ski 2500 lbs. (Type Certificate No. 158, 5-5-45)

George M. Decker Company, control wheel, model 1020. (Type Certificate No. 160, 7-27-45)

New Models

Aircraft—

Boeing, model A75J1 (Army PT-18); 2-place open or closed land biplane. Engine Jacobs R-755-7. (Type Certificate No. 743, 5-28-45)

Aeronca model O-58-A (Army L-3A), 2-place closed land monoplane. Engine, Continental A-65-8. (Type Certificate No. 751, 3-13-45)

Aeronca model YO-58 (Army L-3), 2-place closed land monoplane. Engine, Continental A-65-8. (Type Certificate No. 728, 3-13-45)

Boeing, model SA-3070B-1, 43-place closed land monoplane. Engines, 4 Wright Cyclones 731C9GC2 with two 4½ N dampers and 16:9 reduction gear ratio. (Type Certificate No. 226, 8-23-45)

Engines—

Pratt & Whitney, model Twin Wasp 2SD1-G; 14 cyl. radial air cooled, 2:1 reduction gearing and two-speed supercharger. Rating: 1100 hp at 2550 rpm from sea level to 8300 ft. in low blower (7.15:1) and 1000 hp at 2550 rpm from 10,000 ft. to 17,700 ft. in high blower (9.52:1); Take-off, 1450 hp at 2700 rpm in low blower. Dry weight 1590 lbs. (Type Certificate No. 230, 6-15-45)

Continental model C-75-10, 4 cyl. horizontally opposed air cooled. Rated 75 hp at 2275 rpm at sea level for all operations. Dry weight 182 lbs. (Type Certificate No. 233, 7-16-45)

Continental models C-85-12 and C-85-12J, 4 cyl. horizontally opposed air cooled. Rated 85 hp at 2575 rpm at sea level for all operations. Dry weight 180 lbs. Equipped for electric starter and generator. Model C-85-12 incorporates a carburetor and model C-85-12J a fuel injector. (Type Certificate No. 233, 7-21-45)

Continental model C-125-1, 6 cyl. horizontally opposed aircooled. Rated 125 hp at 2550 rpm at sea level for all operations. Dry weight 255 lbs. Equipped for electric starter and generator. (Type Certificate No. 236, 7-26-45)

Continental, models C-75-8J, -12J, 4 cylinder horizontally opposed air cooled. Rated 75 hp at 2275 rpm for all operations. Dry weights 180 lbs. and 185 lbs., respectively. Both engines equipped with an Excello fuel injector and model -12J provides for use of an electric starter and a generator. (Type Certificate No. 233, 8-17-45)

Propellers—

Sensenich, model 43K19181; wood; 90 in. diameter; 76 in. pitch; 220 hp, 2075 rpm. (Type Certificate No. 546, 5-1-45)

Sensenich, model 90LA, wood; 90 in. diameter; 80 in. to 76 in. pitch; 220 hp, 2075 rpm. (Type Certificate No. 546, 5-1-45)

Flottorp, model 86; wood; 86 in. diameter; 70 in. to 54 in. pitch; 200 hp, 2450 rpm. (Type Certificate No. 817, 5-10-45)

G. B. Lewis, models L55F, L55F-1, L55F-2; wood; 72 in., 71 in., 70 in. diameter respectively; 46 in. to 32 in. pitch; 90 hp, 2700 rpm. (Type Certificate No. 818, 5-11-45)

Fahlin, models D761 and D761A; wood; 96 in. diameter; 62 in. pitch; 225 hp, 2100 rpm. (Type Certificate No. 533, 5-18-45)

Hamilton Standard, model 23E propeller with 6501A-0, 6502A-0, 6507A-0 and 6508A-0 blades; steel hub with aluminum alloy blades; 13 ft. 1 in. to 11 ft. 1 in. diameter; hydromatic controllable feathering; 1100 hp, 1275 rpm. (Type Certificate No. 603, 5-21-45)

Hamilton Standard, model 24E propeller with 6501A-0, 6502A-0,

(See Type Approvals, page 119)

Airline Orders

Service

No. 3977 permits Eastern Air Lines to serve Philadelphia, Pa., on routes Nos. 5 and 6, on Sept. 1, through the use of the Philadelphia-Southwest (Municipal) Airport. (Aug. 24)

No. 3980 severs application of Associated Truck Lines, Docket 1267, now consolidated in the Great Lakes Area case and its application, Docket 1869, now consolidated in the Middle Atlantic Area case, from these proceedings; orders that Docket 1267, as restored, be deferred for hearing in its entirety at some future date and cancels Docket 1869. (Aug. 24)

No. 3981 severs the portion of the application of Van Dyke Airport Service, Docket 1318, which requests authority to conduct scheduled services from that portion which requests authority to conduct nonscheduled operations; dismisses the portion of the application which requests authority to operate scheduled services; orders that the portion of their application pertaining to nonscheduled operations be withdrawn from the proceeding known as the Middle Atlantic Area Case, Page Airways. (Aug. 24)

No. 3982 withdraws, upon the request of Braniff Airways, Dockets 1798 and 1948 from the Great Lakes Area Case and Mississippi Valley Case; orders that the portion of the application in Docket 1798, which was severed and assigned Docket 1948, be reassigned to Docket 1798 and that Docket 1948 be cancelled; withdraws application of Chicago and Southern, Docket 1681, and application of Braniff, Docket 1798, from the Mississippi Valley Case. (Aug. 25)

No. 3985 approves application of Transcontinental & Western for authority to conduct nonstop service between St. Louis, Mo., and Detroit, Mich. (Issued with an opinion—Aug. 21)

No. 3993 permits Delta Air Corp., to inaugurate on Sept. 1, nonstop services between Monroe, La., and Dallas, Tex., and between Dallas and New Orleans, La., on route 24. (Aug. 28)

No. 3994 grants the Cities of Cincinnati, Lima, Ohio, and Nashville, and the Tri-City Airport Commission, leave to intervene in the Great Lakes Area Case—Docket 535 et al. (Aug. 28)

No. 3995 dismisses, upon the request of Dayton and Western Ohio Airlines, and Cincinnati and Lake Erie Transportation Co., their applications for certificates in the Great Lakes Area Proceeding. (Aug. 28)

No. 3996 notifies Braniff Airways that the national defense no longer requires that inauguration of service to and from Tulsa and Muskogee, Okla., Fort Smith and Little Rock, Ark., and Memphis, Tenn., be delayed. (Aug. 28)

No. 3997 grants petition of United Air Lines requesting that Docket 517 be reopened; vacates Board order No. 3823; approves application of United for authority to conduct nonstop service between Fresno and Sacramento, Calif. (Aug. 28)

No. 4004 orders that the application of Columbian Airlines, Docket 1963, for a certificate, be consolidated in Docket 535 et al. (Aug. 30)

No. 4017 grants request of Alaska Airlines that hearing be delayed on Docket 863 pending decision in the Pacific Case; assigns application of Toussaint Air Service for hearing before an examiner of the Board at a time and place to be designated later. (Sept. 7)

Nos. 4018 and 4019 dismiss, upon the request of Alaska Airlines, applications, Dockets 873 and 920 respectively, for an exemption from the provisions of sec. 401(a) of the Civil Aeronautics Act. (Sept. 7)

No. 4024 permits the Port of Seattle, Wash., Port of Tacoma, Advisory Commission of the State of Washington, and the Cities of Seattle and Tacoma to intervene in the Pacific Case; denies request that the Seattle and Tacoma Chambers of Commerce be permitted to intervene. (Sept. 10)

No. 4025 grants Colonial Airlines a certificate authorizing transportation between Washington, D. C., and Montreal and Ottawa, Canada, via certain intermediate points; amends the airline's certificate for its route between New York and Montreal so as to authorize service between the intermedite points Burlington, Vt., and Massena, N. Y., and the terminal point Ottawa; amends the certificate of Pennsylvania-Central for route 34 to include Elmira-Corning and Rochester, N. Y., as intermediate points on that route; amends the certificate of American Airlines for route 7 to include Elmira-Corning and Binghamton, N. Y., as intermediate points with restrictions against serving Binghamton on any flights serving Wilkes-Barre, Scranton or Syracuse; defers decision on the application of American for an extension of route 7 from Wilkes-Barre to Philadelphia via Allentown-Bethlehem; dismisses applications of Hylan Flying Service and Union Airways; denies applications of Eastern, Page Airways, United Air Lines, and except as indicated above, the applications of Colonial, Pennsylvania-Central and American. (Issued with an opinion—Aug. 10)

No. 4026 temporarily exempts Alaska Airlines from those provisions of sec. 401(a) of the Act which would prevent Alaska from temporarily transporting mail between Unalakleet and Anchorage, via McGrath; from temporarily transporting persons, property and mail between Akulurak and Mountain Village; between Haycock and Golvin, and between Koyuk and Golvin. (Sept. 13)

No. 4027 orders that Western Air Lines be notified that the national defense no longer requires delay in the inauguration of service to and from El Centro, Palm Springs, and San Bernardino, Calif. (Sept. 13)

No. 4028 denies Trans-Marine Airlines leave to intervene in the application of Northeast Airlines for amendments of its certificates authorizing consolidation of routes 27, 65 and 70. (Sept. 13)

No. 4029 authorizes Continental Air Lines to suspend service temporarily at Hutchinson, Kans., on Route 60, at Las Vegas, N. Mex., on route 29, and at La Junta, Colo., on route 43. (Sept. 13)

No. 4030 permits Continental to inaugurate nonstop service, on Aug. 30, between Denver, Colo., and Albuquerque, N. Mex. (Sept. 14)

No. 4032 permits National Federation of American Shipping leave to appear as amicus curiae in the proceeding concerning the applications of Hawaiian Airlines, Matson Navigation Co., Northwest Airlines, Western Air Lines, United Air Lines, Ryan School of Aeronautics, and Ryan Aeronautical Co., for certificates. (Sept. 14)

No. 4033 orders an investigation to determine whether the temporary suspensions of service by Pennsylvania-Central at Clarksburg and Morgantown, W. Va., on route 55, by American at Clarksburg, on route 25, and by Transcontinental and Western at Morgantown, on route 61, are in the public interest and whether the failure of Penn-Central and TWA to provide service at the aforementioned points are in violation of secs. 404(a) and (b) and 401(k) of the Act; assigns proceeding for public hearing before an examiner of the Board at a time and place to be designated later. (Sept. 14)

No. 4036 consolidates with the Great Lakes Area Proceeding, applications of Edward F. Zedeker, Purdue Aeronautics Corp., and Trans Ohio Airlines for service in that area. (Sept. 18)

No. 4037 denies American Airlines' request for temporary suspension of service at Windsor, Ontario, Canada.

No. 4038 denies City of Nashville, Tenn., permission to intervene in the North Central Case.

No. 4049 denies petitions of the City of Bremerton, Wash., the Bremerton and Spokane Chambers of Commerce to intervene in the Pacific Case. (Sept. 21)

No. 4050 permits the City of Anchorage, Alaska, to intervene in the Pacific Case. (Sept. 21)

Miscellaneous

No. 3978 approves an agreement by and between United Air Lines and Mid-Continent Airlines relating to the lease of a station and other facilities by United to Mid-Continent at Kansas City. (Aug. 24)

No. 3979 grants the Air Transport Association of America permission to appear as amicus curiae in the proceeding concerning certain activities of Trans-Marine Airlines, Inc. (Aug. 24)

No. 3999 approves an agreement by and between Pan American Airways and Braniff Airways relating to air-conditioning of Braniff's planes at Brownsville, Tex. (Aug. 29)

No. 4000 approves an agreement by and between American Mid-Continent, Eastern, Chicago and Southern and Transcontinental and Western Air relating to the management of the Lambert-St. Louis Airport. (Aug. 29)

No. 4001 approves an agreement, subject to certain provisions, by and between Alaska Airlines and certain other air carriers named therein as members of the Air Traffic Conference of America relating to resolution of the Air Traffic Conference providing for a proration of costs for maintaining air mail field post offices. (Aug. 29)

No. 4002 approves interlocking relationships of the holding by Sidney Maestre of the positions as Director of Transcontinental and Western Air and of Missouri-Kansas-Texas Railroad Co.

No. 4003 dismisses complaints of Northeast and Pennsylvania-Central against certain air carriers. (Aug. 30)

No. 4031 approves an agreement by and between United and Transcontinental and Western Air relating to use of United's plane cleaner unit at Washington National Airport by TWA. (Sept. 14)

No. 4034 orders that Board order of May 25, relating to an agreement between Pan American Airways and Panair do Brasil, be rescinded and order No. 4035 be substituted. (Sept. 14)

No. 4035 orders Board investigation to determine when the agreement by and between Pan American and Panair do Brasil, S. A., relating to the furnishing of certain facilities and services to Pan American are adverse to the public interest and should be disapproved or the amendments be amended; assigns for hearing before a Board examiner at a time and place to be designated later. (Sept. 14)

No. 4039 extends to December 27, 1945, the suspension period for the revised rules of Pan American Airways System, Local and Joint Passenger Tariff. (Sept. 19)

No. 4047 orders investigation to determine if The Aviation Corporation has acquired, and holds, control of American Airlines, and if such acquisition would be to the public interest. A public hearing will be held before a Board examiner. (Sept. 19)

Airman Orders

Suspensions

No. 3983 suspends student certificate of Edwin B. Armitage, Jr., for 6 months because he performed acrobatics at an altitude of less than 500 feet and violated other provisions of the Civil Air Regulations. (Aug. 28)

No. 3984 suspends student certificate of Frank J. Bonin for 6 months because he piloted a plane in the vicinity of Towanda, Pa., at an altitude of less than 500 feet. (Aug. 28)

No. 3986 suspends private certificate of Frederick E. Bowman for 60 days because he flew an aircraft acrobatically although neither he nor his passenger were properly equipped with a 'chute manufactured under a valid type of certificate and maintained in accordance with the provisions of the Civil Air Regulations. (Aug. 28)

No. 3987 suspends private certificate of Wayne W. Jones for 4 months because he failed to make a prompt written report of an accident and violated other provisions of the Civil Air Regulations. (Aug. 28)

No. 3989 suspends student certificate of Angelo Armand Vita for 90 days because he flew at an altitude of less than 1000 feet over a congested area of the City of Hartford. (Aug. 28)

No. 3991 suspends private certificate of John A. Werner for 6 months. On Aug. 2 Werner was issued a private certificate which cancelled his student certificate. While the holder of a student certificate, however, Werner landed an aircraft at Stevens Point Municipal Airport crosswind and against the traffic pattern when two other planes were in the correct traffic pattern. He also violated other provisions of the Civil Air Regulations. (Aug. 28)

No. 4007 suspends the student certificate of Edward George Brace for 6 months for flying too low. (Aug. 31)

No. 4010 suspends the private certificate of George James Stathas for 6 months for flying too low. (Aug. 31)

No. 4013 suspends the mechanic certificate of Charles Toth for 6 months for certifying an airplane as airworthy when it was not in that condition. (Aug. 31)

No. 4015 suspends the engine mechanic certificate of Claude Eugene Demonbruen for 6 months for failure to properly perform the duties of his rating. (Sept. 5)

No. 4020 suspends the mechanic certificate of Charles Wallace Gray, Jr., for having certified that a major overhaul and repairs had been made on an airplane when such was not the case. Gray had failed to pass his written examination and his certificate is suspended until he has attained a passing mark. (Sept. 7)

No. 4021 suspends the student certificate of Donald David Smith for 90 days for failure to report an accident. (Sept. 7)

Revocations

No. 3854 revokes student certificate of Eugene A. Hesselgrave because he flew in or near the vicinity of Robbinsdale and/or St. Cloud, Minn., and carried a passenger when neither he nor his passenger was properly certificated for such operation. (July 20)

No. 3855 revokes student certificate of Charles H. Banks because he flew from Hadley Airport, New Brunswick, N. J., while carrying a passenger other than a certificated instructor. (July 20)

No. 3856 revokes commercial certificate of Thomas S. Hoopingarner because he performed acrobatics over a congested area and violated other provisions of the Civil Air Regulations. (July 20)

No. 3861 revokes commercial certificate with flight instructor rating of Henry S. Nordman because he flew an aircraft while under the influence of intoxicating liquor and violated other provisions of the Civil Air Regulations. (July 20)

No. 3885 revokes student certificate of Selwyn Vanderpool because he carried a passenger other than a certificated instructor. (July 24)

No. 3886 revokes student certificate of Robert W. Fulk because he carried a passenger other than a certificated instructor and violated other provisions of the Civil Air Regulations. (July 24)

No. 3887 revokes student certificate of Richard M. Ruppenthal because he carried a passenger other than a certificated instructor and flew between official sunset and sunrise without showing position lights. (July 24)

No. 3910 revokes student certificate of Paul L. Gustafson because he carried a passenger other than a certificated instructor and operated an aircraft on a solo flight outside of the area within a 150-mile radius of the operating base of his instructor. (Aug. 3)

No. 3925 revokes student certificate of William O. Cochrane, Jr., because he carried a passenger who was not a certificated instructor. (Aug. 8)

No. 3941 revokes commercial certificate of Donald F. Sigmund because he piloted an aircraft from the front seat when the placarded instruction on the aircraft read "Solo Flight from Rear Seat Only." Sigmund also violated other provisions of the Civil Air Regulations. (Aug. 14)

No. 3942 revokes student certificate of Robert B. King because he carried a passenger, when neither he nor his passenger was properly certificated for such operation. (Aug. 14)

No. 3943 revokes student certificate of Harry T. Lucas, Jr., because he carried a passenger other than a certificated instructor. (Aug. 14)

No. 3968 revokes student certificate of George I. Mills because he carried a passenger other than a certificated instructor. (Aug. 21)

No. 3969 revokes student certificate of Robert V. Henninger because he performed acrobatic maneuvers, including abrupt dives and pull-ups, over congested areas of the City of Bismarck, N. Dak., and violated other provisions of the Civil Air Regulations. (Aug. 21)

No. 3973 revokes student certificate of Frank J. Billmayer because he carried passengers other than certificated instructors and violated other provisions of the Civil Air Regulations. (Aug. 21)

No. 3974 revokes the student license of Douglas Hook for flying outside the approved radius of his operating base and carrying a passenger. It is further ordered Hook may not be issued any type of pilot certificate prior to Aug. 24, 1946. (Aug. 24)

No. 3975 revokes flight instructor rating of Robert Frank Swanner, Jr., for disregarding the lives and safety of others. Swanner shall not be issued flight instructor rating before Aug. 24, 1946. (Aug. 24)

No. 3976 revokes private pilot certificate of Frank Hyndman Werner provided he does not show good cause within ten days of the receipt of this order why it should not become effective. Werner carried a passenger while holding a student certificate. It is further ordered Werner shall not be issued any type of pilot certificate prior to Aug. 24, 1946. (Aug. 24)

No. 3988 revokes student certificate of John Albert Lundquist for flying too low over a congested area and piloting his craft in a reckless and dangerous manner by diving at a group of school children. Lundquist shall not be issued another airman certificate prior to Aug. 28, 1946. (Aug. 28)

No. 3990 revokes student certificate of Thad Wayne Wardall for carrying a passenger. Wardall shall not be issued any type of pilot certificate before Aug. 28, 1946. (Aug. 28)

No. 3992 revokes student pilot certificate of Karl Barge Wiemann for carrying passengers and breaking other rules. Wiemann shall not be issued any type of pilot certificate before Aug. 28, 1946. (Aug. 28)

No. 4005 revokes student certificate of George Donovan Padgett for violating a number of regulations and for disregarding the lives and safety of others. Padgett shall not be issued any type of pilot certificate prior to Aug. 28, 1946. (Aug. 28)

No. 4006 revokes student certificate of Gene Albert Baustian for carrying passengers. Baustain shall not be issued any type of pilot certificate prior to Aug. 31 1946. (Aug. 31)

No. 4008 revokes student certificate of Richard Lamar Jones for carrying passengers. Jones shall not be issued any type of airman certificate prior to Aug. 31, 1946. (Aug. 31)

No. 4009 revokes student certificate of Manuel Samuel Moore for carrying a passenger. Moore shall not be issued another airman certificate prior to Aug. 31, 1946. (Aug. 31)

No. 4014 revokes the student certificate of Robert Merrill Webster for flying his plane outside the prescribed approved areas; flying before he satisfactorily passed a written examination on Part 60; carrying a passenger, and violating other rules. Webster may not be issued any type of airman certificate prior to Sept. 5, 1946. (Sept. 5)

No. 4016 revokes student certificate of Peter Lloyd Eschweiler for carrying passengers and breaking other rules. He may not be issued an airman certificate of any type prior to Sept. 5, 1946. (Sept. 5)

No. 4022 revokes student certificate of John Richard McCall for carrying a passenger. He shall not be issued any type of pilot certificate prior to April 8, 1946. (Sept. 7)

No. 4023 revokes commercial certificate of Ralph Henry Russell for flying too low over a congested area and performing acrobatic maneuvers. He shall not be issued any type of pilot certificate prior to Aug. 14, 1946. (Sept. 7)

No. 4041 revokes student certificate of Albert Sidney Fink for carrying a passenger. He may not be issued another airman certificate prior to Sept. 18, 1946. (Sept. 18)

No. 4042 revokes student certificate of John Joseph Batti for carrying a passenger. He may not be issued another airman certificate prior to Sept. 18, 1946. (Sept. 18)

Official Actions—Cont.

No. 4043 revokes student certificate of Richard Gerhard Lueck for carrying a passenger. He may not be issued another airman certificate prior to Aug. 4, 1946. (Sept. 18)

No. 4044 revokes student certificate of Malcolm Edward Reed, Jr., for flying outside the area designated by his instructor and breaking other rules. He may not be issued any type of airman cerificate prior to Sept. 18, 1946. (Sept. 18)

No. 4045 revokes commercial certificate of Charles Frederick Mercer, Jr., for operating an airplane in a reckless manner. He may not be issued any type of airman certificate prior to Sept. 18. 1946. (Sept. 18)

No. 4048 revokes the private certificate of Gaylord Sanford Sargent for carrying passengers while the holder of a student certificate and for operating an aircraft of greater horsepower than authorized by his private pilot rating. He shall not be issued any type of pilot certificate prior to Sept. 18, 1946. (Sept. 18)

Miscellaneous

No. 3858 reopened proceeding, upon the request of Charley W. Miller, so that newly discovered evidence could be included before disposition of the case. Mr. Miller holds a commercial certificate. (July 20)

No. 3859 orders that ....[1] be issued a third-class medical certificate provided he meets all other physical requirements. (July 20)

No. 3860 orders that James W. Wilson, who holds a mechanic certificate, appear before an Examiner of the Board and show cause why his certificate should not be suspended or revoked. (July 20)

No. 3870 denies petition of Waldo B. Adams, whose student certificate was revoked by order No. 3732, that the case be reopened and he be granted a hearing. (July 17)

No. 3888 denies request of John C. Marshall for reconsideration and vacating of Board order No. 3827 which suspended his student certificate for 90 days. (July 24)

No. 3911 orders that ....[1] be issued a third-class medical certificate provided he meets the other requirements therefor. (Aug. 3)

No. 3912 orders that ....[1] be issued a third-class medical certificate provided he meets the other requirements necessary. (Aug. 3)

No. 3913 orders that ....[1] be issued a third-class medical certificate provided he meets the other requirements necessary. (Aug. 3)

No. 3914 dismisses Administrator's complaint concerning Raymond L. Stephens who holds an A & E mechanic certificate. (Aug. 3)

No. 3929 orders that ....[1] be issued a third-class medical certificate provided he is otherwise qualified and that his physical defects be noted on any medical certificate issued to him. (Aug. 8)

No. 3998 assigns the proceeding concerning Arthur J. Hartman, who holds a mechanic certificate with aircraft and aircraft engine ratings, for oral argument before the Board. (Aug. 28)

No. 4011 denies the request of Maurice J. Devoe for reconsideration of Board order No. 3416 which revoked Devoe's student certificate. (Aug. 31)

No. 4040 assigns the proceeding concerning Harry A. Grant, who holds a commercial certificate with airplane single-engine land and sea, O-80 hp, and flight instructor ratings, for oral argument before the Board. (Sept. 18)

[1] Note: It is Board policy to omit names in cases of physical disability.

Regulations

Amdt. 24–1 ..... **Effective Sept. 25, 1945**

Mechanic Identification Card—§ 24.54 of the Civil Air Regulations is repealed.

Amdt. 25–1 ..... **Effective Sept. 25, 1945**

Parachute Technician Identification Card—§ 25.8 (a) of the Civil Air Regulations is amended to read as follows:

25.8 General * * * * * (a) he has in his possession his parachute technician certificate; and * * * * *

Note: This amendment repeals the requirement of a parachute technician identification card.

Amdt. 26–2 ..... **Effective Sept. 25, 1945**

Air-traffic Control-tower Operator Identification Card—§ 26.59 of the Civil Air Regulations is repealed.

Amdt. 27–2 ..... **Effective Sept. 25, 1945**

Aircraft Dispatcher Identification Card—§ 27.29 of the Civil Air Regulations is repealed.

Amdt. 41–2 ..... **Effective Sept. 1, 1945**

§ 41.300 (c) of the Civil Air Regulations is amended to read as follows:

41.300 Certificate. * * * * * (c) Any pilot serving as second pilot in an aircraft requiring three or more pilots shall meet the requirements of paragraph (a) of this section: Provided, That until January 1, 1946, any pilot may serve as second pilot in an aircraft requiring three or more pilots, if he holds at least a commercial pilot certificate and instrument rating and has demonstrated to an air carrier inspector of the Administrator or to an authorized check pilot of the air carrier his ability to take off and land aircraft in which he is to serve.

Amdt. 43–2 ..... **Effective Sept. 5, 1945**

Identification Card—§ 43.401 of the Civil Air Regulations is repealed.

Amdt. 43–3 ..... **Effective Sept. 12, 1945**

Search of Passengers' Baggage—§ 43.82 of the Civil Air Regulations is repealed.

Amdt. 51–1 ..... **Effective Sept. 25, 1945**

Ground Instructor Identification Card—§ 51.29 of the Civil Air Regulations is repealed.

Reg. 323–A ..... **Effective Aug. 22, 1945**

Special Civil Air Regulation Serial Number 323 is amended to read as follows:

Notwithstanding the provisions of §§ 61.5140(a), 61.5141(b), 61.5150(a), and 61.5151(b), any first pilot who on or subsequent to December 7, 1941, was qualified as such and as competent over a regular or alternate route and who has been employed as first pilot in military air transport operations will be considered competent over such route after completing over the route either (a) one one-way trip as first pilot accompanied by a check pilot or (b) two one-way trips as second pilot.

This regulation shall terminate March 1, 1946.

Reg. 342–A ..... **Effective Sept. 21, 1945**

1. On July 12, 1945 because of the war needs resulting from a transportation crisis the Board adopted Special Civil Air Regulation Serial Number 342; and

2. The continuance of such regulation is not now required for the war effort.

Effective September 21, 1945, Special Civil Air Regulation Serial Number 342 is hereby repealed.

AIR REGULATIONS . . . As of October 1, 1945

Title	Part No.	Price		Date Latest Edition		No. Amendments Issued	
		Part	Manual	Part	Manual	Part	Manual
Aircraft							
Airworthiness Certificates	01	$0.05	None	10/15/42	None	1[1]	.....
Type and Production Certificates	02	.05	$0.10	3/1/41	3/15/45	.....	.....
Airplane Airworthiness	04	.15	.45	11/1/43	7/1/44	3[2]	.....
Engine Airworthiness	13	.05	None	8/1/41	None	.....	.....
Propeller Airworthiness	14	.05	.15[7]	7/15/42	6/1/45	.....	.....
Equipment Airworthiness	15	Free	.10	4/15/44	7/1/38	.....	.....
Radio Equipment Airworthiness	16	.05	Free	2/13/41	2/13/41	.....	1
Maintenance, Repair, and Alteration of Aircraft, Engines, Propellers, Instruments	18	.05	.50	9/1/42	6/1/43	.....	.....
Airmen							
Pilot certificates	20	.05	None	7/1/45	None	.....	.....
Airline Pilot Rating	21	.05	None	10/1/42	None	3	.....
Lighter-than-air Pilot Certificates	22	.05	None	10/15/42	None	1	.....
Mechanic Certificates	24	.05	None	7/1/43	None	1[3]	.....
Parachute Technician Certificates	25	.05	None	12/15/43	None	1	.....
Traffic Control Tower Operator Certificates	26	.05	None	2/1/44	None	2	.....
Aircraft Dispatcher Certificates	27	.05	None	10/1/43	None	2	.....
Physical Standards for Airmen	29	.05	None	6/1/42	None	3	.....
Operation Rules							
Air Carrier Operating Certification	40	.10	None	10/10/44	None	2	.....
Scheduled Air Carrier Operations Outside Continental U. S.	41	Free	None	9/1/45	None	2	.....
General Operation Rules	43	.05	None	7/1/45	None	3	.....
Foreign Air Carrier Regulations	44[4]	.05	None	7/1/45	None	.....	.....
Transportation of Explosives and other Dangerous Articles	49	.05	None	7/1/45	None	.....	.....
Air Agencies							
Flying School Rating	50	.05	Free	11/1/40	12/40	3	2
Ground Instructor Rating	51	.05	None	12/15/43	None	1	.....
Repair Station Rating	52	.05	(5)	10/1/42	2/41	.....	.....
Mechanic School Rating	53	.05	(5)	8/1/42	5/40	.....	.....
Parachute Loft Certificates and Ratings	54	.05	None	1/21/43	None	.....	.....
Air Navigation							
Air Traffic Rules	60	.05	.15	8/1/45	8/1/43	1	.....
Scheduled Air Carrier Rules	61	.10	None	2/1/44	None	5[6]	.....
Miscellaneous							
Rules of Practice Governing Suspension and Revocation Proceedings	97	Free	None	7/6/45	None	.....	.....
Definitions	98	.05	None	10/15/42	None	.....	.....
Mode of Citation	99	Free	None	11/15/40	None	.....	.....
Regulations of the Administrator							
Aircraft Registration Certificates	501	Free	None	3/31/43	None	.....	.....
Recordation of Aircraft Ownership	503	Free	None	3/31/43	None	.....	.....
Seizure of Aircraft	531	Free	None	12/8/41	None	.....	.....
Regulations Governing the Distribution and Use of Aviation Gasoline	534	Free	None	9/16/44	None	.....	.....

[1] Special regulation 233. [2] Special regulations 228 and 342. [3] Special regulation 340. [4] Supersedes Part 66. [5] Out of stock. [6] Special regulation 342. [7] Obtain Manual 14 from CAA Office of Aviation Information, A-240, Dept. of Commerce, Washington 25, D. C.

Note: Those parts and manuals for which there is a price are obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Remittances must be by cash or by money order, payable to the Superintendent. Free Parts are obtained from the Publications Section, Civil Aeronautics Board, Washington 25, D. C.; and the free Manuals and Regulations of the Administrator from the CAA Office of Aviation Information, Dept. of Commerce, Washington 25, D. C.

Type Approvals

(Continued from page 117)

6507A–0 and 6508A–0 blades; steel hub with aluminum alloy blades; 13 ft. 2 in. to 11 ft. 2 in. diameter; hydromatic controllable feathering; 1625 hp, 1275 rpm. (Type Certificate No. 785, 5-21-45)

Hamilton Standard, model 33E propeller with 6501A–0, 6502A–0, 6507A–0 and 6508A–0 blades; steel hub with aluminum alloy blades; 13 ft. 2 in. to 11 ft. 2 in. diameter; hydromatic controllable feathering; 110 hp, 1275 rpm. (Type Certificate No. 786, 5-21-45)

Hartzell, model 667K; wood; 98 in. diameter; 66 in. to 58 in. pitch; 225 hp, 2100 rpm. (Type Certificate No. 631, 6-8-45)

Flottorp, models 86RA, 86RB; wood; 86 in. diameter, 70 in. to 54 in. pitch; 200 hp, 2450 rpm. (Type Certificate No. 817, 6-11-45)

Sensenich, model 60BA; wood; 60 in. diameter; 34 in. pitch; 50 hp, 3000 rpm. (Type Certificate No. 734, 6-16-45)

Sensenich, model 60DA; wood; 60 in. diameter; 41 in. pitch; 50 hp, 3000 rpm. (Type Certificate No. 734, 6-16-45)

Sensenich, model 60EA; wood; 60 in. diameter; 28 in. pitch; 50 hp, 3000 rpm. (Type Certificate No. 734, 6-16-45)

Sensenich, models 86BS, 86BAS; wood; 86 in. diameter, 63 in. to 51 in. pitch; 200 hp, 2450 rpm. (Type Certificate No. 586, 6-30-45)

Sensenich model 78RW; wood; 78 in. diameter; 65 in. to 59 in. pitch; 90 hp, 2050 rpm. (Type Certificate No. 538, 7-10-45)

Sensenich model 76AA; wood; 76 in. diameter; 60 in. to 54 in. pitch; 113 hp, 2205 rpm. (Type Certificate No. 538, 7-23-45)

Sensenich, models 98AB and 98AC; wood; 98 in. diameter, 68 in. to 62 in. pitch; 220 hp, 2075 rpm. (Type Certificate No. 546, 8-31-45)

Koppers, model 221 2-blade propeller with 1-85 blades; steel hub with wood blades; 85 in. to 75 in. diameter; automatic pitch; 190 hp, 2550 rpm. (Type Certificate No. 819, 8-31-45)

Koppers, model 221 2-blade propeller with 1-90 blades; steel hub with wood blades; 90 in. to 86 in. diameter; automatic pitch; 145 hp, 2050 rpm. (Type Certificate No. 819, 8-31-45)

Hamilton Standard, model 22D propeller with 6531A–O and 6532A–O blades; steel hub with aluminum alloy blades; 9 ft. 7 in. diameter; hydromatic controllable feathering; 550 hp, 2300 rpm. (Type Certificate No. 736, 8-7-45)

Hamilton Standard, model 22D propeller with 6533A–O and 6534A–O blades; steel hub with aluminum alloy blades; 10 ft. 1 in. diameter; hydromatic controllable feathering; 650 hp, 2300 rpm. (Type Certificate No. 736, 8-7-45)

Hamilton Standard, model 22D propeller with 6535A–O and 6536A–O blades; steel hub with aluminum alloy blades; 10 ft. 10 in. diameter; hydromatic controllable feathering; 650 hp, 2200 rpm. (Type Certificate No. 736, 8-7-45)

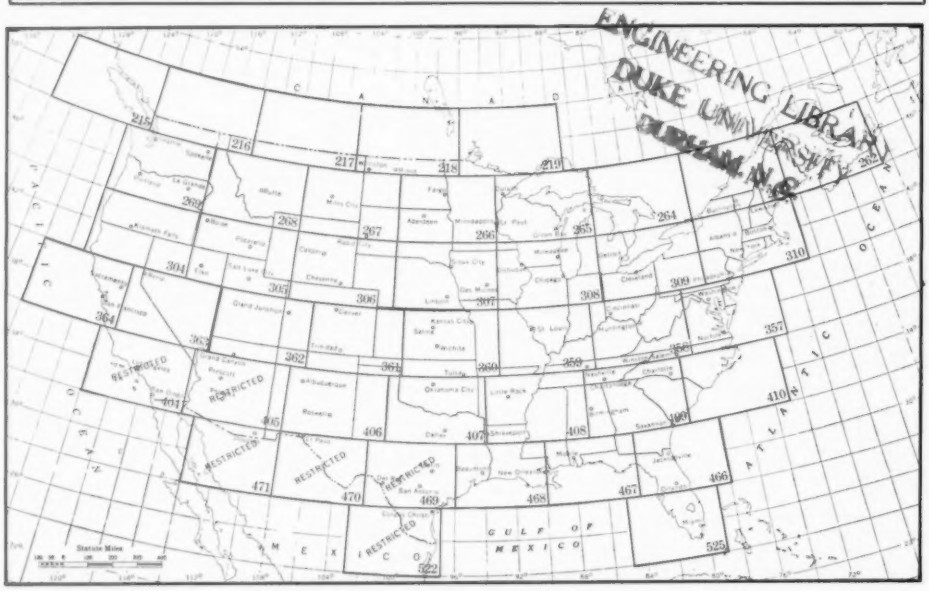
Hamilton Standard, model 23D propeller with 6529A–O and 6530A–O blades; steel hub with aluminum alloy blades; 11 ft. 7 in. diameter; hydromatic controllable feathering; 850 hp, 1800 rpm. (Type Certificate No. 719, 8-7-45)

Hamilton Standard, model 23D propeller with 6531A–O and 6532A–O blades; steel hub with aluminum alloy blades; 9 ft. 7 in. diameter; hydromatic controllable feathering; 825 hp, 2100 rpm. (Type Certificate No. 719, 8-7-45)

Hamilton Standard, model 23D propeller with 6533A–O and 6534A–O blades; steel hub with aluminum alloy blades; 10 ft. 1 in diameter; hydromatic controllable feathering; 850 hp, 2100 rpm. (Type Certificate No. 719, 8-7-45)

Hamilton Standard, model 23D propeller with 6535A–O and 6536A–O blades; steel hub with aluminum alloy blades; 10 ft. 10 in. diameter; hydromatic controllable feathering; 850 hp, 2100 rpm. (Type Certificate No. 719, 8-7-45)

Geodetic Survey Prepares New Maps For Civilians



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World Air Chart areas are outlined in black and identified by numerals. Those which are still restricted are so marked.

Air Charts

(Continued from first page)

cities of the route. Indexes showing the route charts available are also given.

The type of information shown on the route charts is identical with that on the world air charts and the scale is the same. The preparation of the route charts was made possible at low cost and in record time by a novel cartographic development, the assembling of the portions of the world air charts required to form the new air route charts. The process is sometimes referred to as "scissors cartography."

Cheap Insurance—The one disadvantage of any route chart, of course, is that in the event of departure from the route, intentional or otherwise, pilots are left without charts of the ground beneath. It is good practice, and cheap insurance, to have standard charts conveniently available in the aircraft, as a supplement to the more convenient route charts.

The world air charts and the route charts both are priced at 25 cents each. They may be obtained from the Director, U. S. Coast and Geodetic Survey, Washington 25, D. C., or from authorized agents at principal cities and airports throughout the United States. A list of the authorized agents may also be obtained from the Director of the Coast and Geodetic Survey.

Chart indexes, identified by number and locations, follow:

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268	Bitterroot Range	Idaho-Montana
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307	Platte River	Nebraska
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309	Lake Erie	Canada-United States
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357	Chesapeake Bay	Maryland
358	Kanawha River	West Virginia
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360	Kansas River	Kansas
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404	Mojave Desert	California
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410	Pamlico Sound	North Carolina
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525	Lake Okeechobee	Florida

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These are restricted at present.

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221	Seattle	San Francisco
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Alaska

These charts are restricted at present.

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7	Anchorage	Nome
8	Fairbanks	Nome
9	Fairbanks	Bethel
10	Yakutat	Anchorage
11	Ketchikan	Yakutat
12	Seattle	Ketchikan
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14	Edmonton	Watson Lake, Can.
15	Watson Lake, Can.	Fairbanks
16	Seattle	Prince George, Can.
17	Edmonton, Can.	Ketchikan

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Student Pilots Again Cautioned By CAA On Passenger Rule

With the postwar increase in private flying well under way, the Civil Aeronautics Administration again warns student pilots that the carrying of passengers will result in the loss of their licenses.

Twenty-five student pilots who carried passengers in their planes during the last year had their certificates revoked by order of the Civil Aeronautics Board, which judges violations and imposes penalties.

The Civil Air Regulations provide for suspension or revocation of certificates in the event of infractions. Usually, revocations are imposed only for serious violations, such as the carrying of passengers.

Because of the inherent danger to others when students carry passengers, the Civil Aeronautics Board has expressed strong disapproval of such a practice and has announced that carelessness and disregard for the lives and safety of others and the disregard of the Civil Air Regulations manifested when the student violates this regulation will be sufficient cause to justify refusal to issue any type of pilot certificate.

Want an Airplane Plant?

Among the government-owned airplane plants currently offered for sale by the Reconstruction Finance Corporation, are several located in the eastern part of the United States.

The plants include those operated by the Bendix Aviation Corporation at Sidney, N. Y., 183,000 sq. ft. floor space, occupying 6¼ acres; Bell Aircraft Corporation, Burlington, Vt., 130,000 sq. ft. floor space, tract of 20 acres; Aviation Corporation, Williamsport, Pa., 161,430 sq. ft. floor space, tract, 6 acres; Bellanca Aircraft Corporation, New Castle, Del., one-story brick building on about three-tenths of an acre; American Propeller Corporation, 415,000 sq. ft. floor area, tract of 77 acres; Bell Aircraft Corporation, Buffalo, N. Y., 38 buildings with total floor space of 1,250,000 sq. ft., on 307 acres; Bellanca Aircraft Corporation, New Castle, Del., 122,000 sq. ft. floor space, tract of 16 acres; and Koppus Co., Inc., Baltimore, Md., 112,000 sq. ft. floor space, and tract of nearly 6 acres.

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